



# **STIC Search Report**

## **EIC 1700**

**STIC Database Tracking Number: 176626**

**TO: Anthony Green**  
**Location: REM 9C15**  
**Art Unit : 1755**  
**January 18, 2006**

**Case Serial Number: 10/523676**

**From: Ross Shipe**  
**Location: EIC 1700**  
**REMSSEN 4B31**  
**Phone: 571/272-6018**  
**Ross.Shipe@uspto.gov**

### **Search Notes**

Examiner Green:

Please review the attached search results.

If you have any questions or if you would like to refine the search query, please feel free to contact me at any time.

Thanks you for using EIC 1700 search services!

Ross Shipe (ASRC)  
Technical Information Specialist

**SEARCH REQUEST FORM****Scientific and Technical Information Center**

Requester's Full Name: Anthony Green Examiner #: \_\_\_\_\_ Date: \_\_\_\_\_  
 Art Unit: \_\_\_\_\_ Phone Number 30 \_\_\_\_\_ Serial Number: \_\_\_\_\_  
 Mail Box and Bldg/Room Location: \_\_\_\_\_ Results Format Preferred (circle): PAPER DISK E-MAIL

**If more than one search is submitted, please prioritize searches in order of need.**

\*\*\*\*\*

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: Pigment preparations Based on Picketopyrrolyne

Inventors (please provide full names): \_\_\_\_\_  
 \_\_\_\_\_

Earliest Priority Filing Date: \_\_\_\_\_

*\*For Sequence Searches Only\* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.*

\*\*\*\*\*

**STAFF USE ONLY**

	Type of Search	Vendors and cost where applicable
Searcher: <u>ROS</u>	NA Sequence (#) _____	STN <u>✓</u>
Searcher Phone #: _____	AA Sequence (#) _____	Dialog _____
Searcher Location: _____	Structure (#) <u>2</u>	Questel/Orbit _____
Date Searcher Picked Up: _____	Bibliographic _____	Dr.Link _____
Date Completed: <u>1/18/06</u>	Litigation _____	Lexis/Nexis _____
Searcher Prep & Review Time: <u>30</u>	Fulltext _____	Sequence Systems _____
Clerical Prep Time: _____	Patent Family _____	WWW/Internet _____
Online Time: <u>123</u>	Other _____	Other (specify) _____

=&gt; d his full

L6 FILE 'LREGISTRY' ENTERED AT 15:45:52 ON 17 JAN 2006  
STRUCTURE

L9 FILE 'REGISTRY' ENTERED AT 15:51:17 ON 17 JAN 2006  
392 SEA SSS FUL L6  
SAV L9 GRE676/A

L39 FILE 'REGISTRY' ENTERED AT 17:03:48 ON 17 JAN 2006  
2 SEA SUB=L9 SSS SAM L38  
L40 63 SEA SUB=L9 SSS FUL L38  
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L41 329 SEA ABB=ON PLU=ON L9 NOT L40

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L45 766 SEA ABB=ON PLU=ON L9  
L46 26 SEA ABB=ON PLU=ON L45 (L) ?SULFON?  
L47 1 SEA ABB=ON PLU=ON 2004:117181/AN  
L48 1 SEA ABB=ON PLU=ON L44 AND L47  
L49 49 SEA ABB=ON PLU=ON L46 OR L44  
L52 13 SEA ABB=ON PLU=ON L45 (L) PIGMENT? (L) DISPERS? (L)  
?PYRROLE?  
L54 2 SEA ABB=ON PLU=ON L45 (L) PIGMENT? (L) DISPERS? (L)  
DIKETOPYRROLOPYRROLE#  
L58 35 SEA ABB=ON PLU=ON L49 AND (42-? OR 41-?)/SC,SX  
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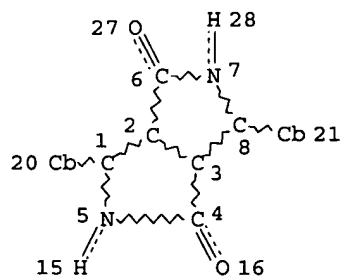
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=&gt; d que stat l64

L6 STR



## NODE ATTRIBUTES:

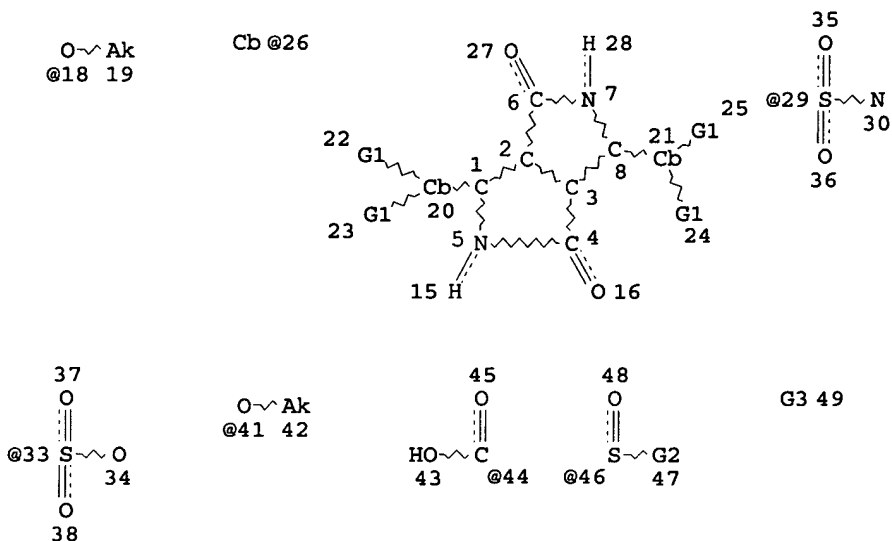
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 DEFAULT ECLEVEL IS LIMITED  
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## GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED  
 NUMBER OF NODES IS 14

## STEREO ATTRIBUTES: NONE

L9 392 SEA FILE=REGISTRY SSS FUL L6  
 L38 STR



VAR G1=H/X/AK/18/CN/26  
 VAR G2=H/AK/X/OH/44/41  
 VAR G3=29/46/33

## NODE ATTRIBUTES:

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 DEFAULT ECLEVEL IS LIMITED  
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## GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED  
 NUMBER OF NODES IS 38

## STEREO ATTRIBUTES: NONE

L40 63 SEA FILE=REGISTRY SUB=L9 SSS FUL L38  
 L41 329 SEA FILE=REGISTRY ABB=ON PLU=ON L9 NOT L40  
 L42 760 SEA FILE=HCAPLUS ABB=ON PLU=ON L41  
 L43 35 SEA FILE=HCAPLUS ABB=ON PLU=ON L40  
 L44 29 SEA FILE=HCAPLUS ABB=ON PLU=ON L42 AND L43

L45 766 SEA FILE=HCAPLUS ABB=ON PLU=ON L9  
 L46 26 SEA FILE=HCAPLUS ABB=ON PLU=ON L45 (L) ?SULFON?  
 L49 49 SEA FILE=HCAPLUS ABB=ON PLU=ON L46 OR L44  
 L52 13 SEA FILE=HCAPLUS ABB=ON PLU=ON L45 (L) PIGMENT? (L)  
 DISPERS? (L) ?PYRROLE?  
 L54 2 SEA FILE=HCAPLUS ABB=ON PLU=ON L45 (L) PIGMENT? (L)  
 DISPERS? (L) DIKETOPYRROLOPYRROLE#  
 L58 35 SEA FILE=HCAPLUS ABB=ON PLU=ON L49 AND (42-? OR  
 41-?)/SC,SX  
 L63 11 SEA FILE=HCAPLUS ABB=ON PLU=ON (L52 OR L54) AND (42-?  
 OR 41-?)/SC,SX  
 L64 42 SEA FILE=HCAPLUS ABB=ON PLU=ON L63 OR L58

=> file hcaplus

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 USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.  
 PLEASE SEE "HELP USAGETERMS" FOR DETAILS.  
 COPYRIGHT (C) 2006 AMERICAN CHEMICAL SOCIETY (ACS)

=> d l64 1-42 ibib abs hitstr hitind

L64 ANSWER 1 OF 42 HCAPLUS COPYRIGHT 2006 ACS on STN

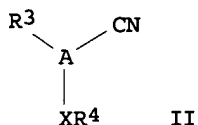
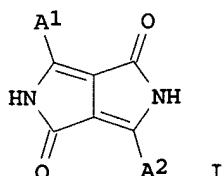
ACCESSION NUMBER: 2005:395400 HCAPLUS  
 DOCUMENT NUMBER: 142:412928  
 TITLE: Heat-stable diketopyrrolopyrrole pigment  
 mixtures for cosmetics  
 INVENTOR(S): Wallquist, Olof; Lenz, Roman; Feiler, Leonhard;  
 Dueggeli, Mathias; Yousaf, Taher; De Keyzer,  
 Gerardus  
 PATENT ASSIGNEE(S): Ciba Specialty Chemicals Holding Inc., Switz.  
 SOURCE: PCT Int. Appl., 54 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005040284	A1	20050506	WO 2004-EP52426	20041004

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA,  
 CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,  
 GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP,  
 KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW,  
 MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD,  
 SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ,  
 VC, VN, YU, ZA, ZM, ZW  
 RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW,  
 AM, AZ, BY, KG, KZ, RU, TJ, TM, AT, BE, BG, CH, CY, CZ,  
 DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL,  
 PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ,  
 GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: CH 2003-1817 A  
 200310  
 23

OTHER SOURCE(S): MARPAT 142:412928  
GI



AB The present invention relates to a process for the prepn. of a mixt. comprising at least two structurally different diketopyrrolopyrrole pigments of formula (I) wherein A1 and A2 are each independently of the other an arom. or heteroarom. radical, by reacting a succinic acid ester with at least one unsubstituted or substituted arom. or heteroarom. nitrile, which process comprises carrying out the reaction in the presence of at least one compd. of formula (II); wherein A is an arom. or heteroarom. radical, R3 is hydrogen, halogen, Me, methoxy, -CF3 or -CN, R4 is a linear or, from C3 upwards, optionally branched C1-C30 alkyl, C6-C10 aryl or C6-C24 aralkyl radical, X is -S-, -O-, -CR5R5'-, -COO-, -CONR5-, -SO-, SO2-, -SO2NR5- or -NR5- and R5 and R5' are each independently of the other hydrogen or a linear or, from C3 upwards, optionally branched C1-C30 alkyl, C6-C10 aryl or C6-C24 aralkyl radical. The invention also includes the use of such a mixt. in the coloring of org. material and in cosmetics (e.g., powder foundation, lipstick formulation, nail varnish), and also to novel diketopyrrolopyrrole pigment mixts.

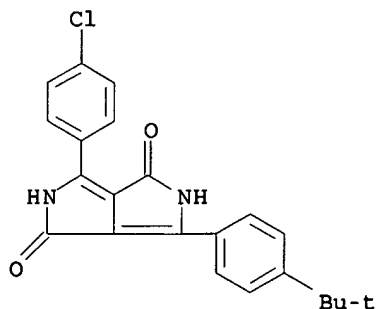
IT 105261-77-6P 850566-77-7P

RL: COS (Cosmetic use); IMF (Industrial manufacture); MOA (Modifier or additive use); TEM (Technical or engineered material use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(dark red pigment; prodn. of heat-stable diketopyrrolopyrrole pigment mixts. for cosmetics)

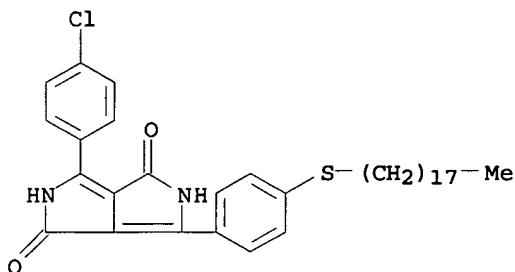
RN 105261-77-6 HCAPLUS

CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3-(4-chlorophenyl)-6-[4-(1,1-dimethylethyl)phenyl]-2,5-dihydro- (9CI) (CA INDEX NAME)



RN 850566-77-7 HCAPLUS

CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3-(4-chlorophenyl)-2,5-dihydro-6-[4-(octadecylthio)phenyl]- (9CI) (CA INDEX NAME)

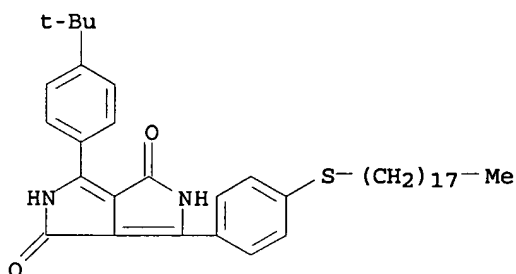


IT 850566-85-7

RL: COS (Cosmetic use); TEM (Technical or engineered material use);  
BIOL (Biological study); USES (Uses)  
(prodn. of heat-stable diketopyrrolopyrrole pigment mixts. for  
cosmetics)

RN 850566-85-7 HCAPLUS

CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3-[4-(1,1-dimethylethyl)phenyl]-2,5-dihydro-6-[4-(octadecylthio)phenyl]- (9CI) (CA INDEX NAME)



IT 84632-65-5P 84632-66-6P 850566-72-2P

850566-74-4P 850566-75-5P 850566-76-6P

850566-78-8P 850566-79-9P 850566-80-2P

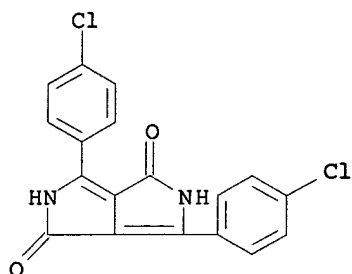
850566-81-3P 850566-82-4P

RL: COS (Cosmetic use); IMF (Industrial manufacture); MOA (Modifier  
or additive use); TEM (Technical or engineered material use); BIOL

(Biological study); PREP (Preparation); USES (Uses)  
 (red pigment; prodn. of heat-stable diketopyrrolopyrrole pigment  
 mixts. for cosmetics)

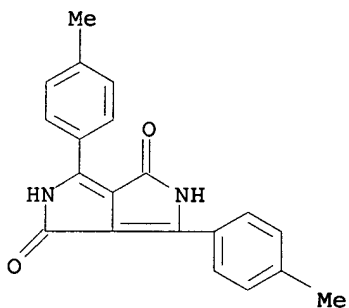
RN 84632-65-5 HCAPLUS

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 (9CI) (CA INDEX NAME)



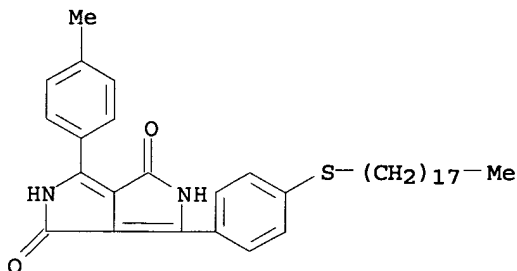
RN 84632-66-6 HCAPLUS

CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-3,6-bis(4-methylphenyl)-  
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RN 850566-72-2 HCAPLUS

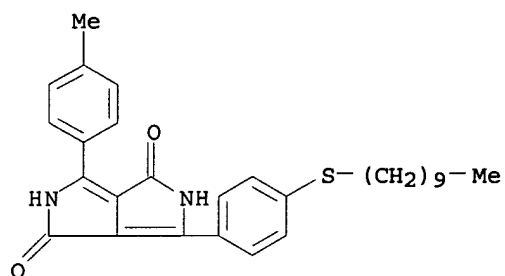
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-3-(4-methylphenyl)-6-[4-(octadecylthio)phenyl]- (9CI) (CA INDEX NAME)



RN 850566-74-4 HCAPLUS

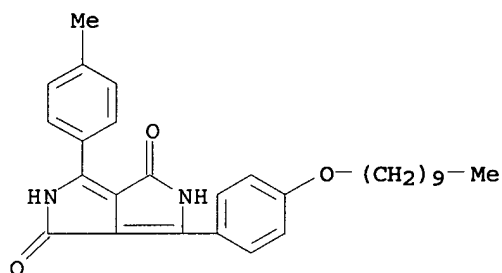
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3-[4-(decylthio)phenyl]-2,5-dihydro-  
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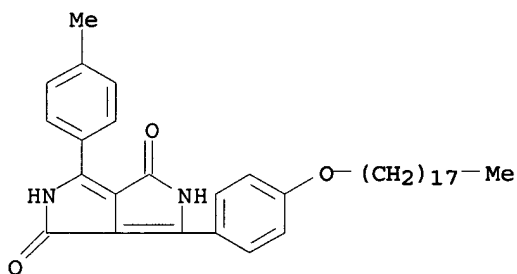
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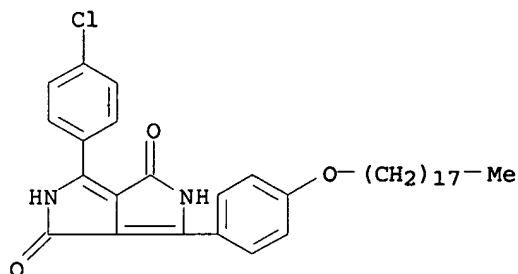
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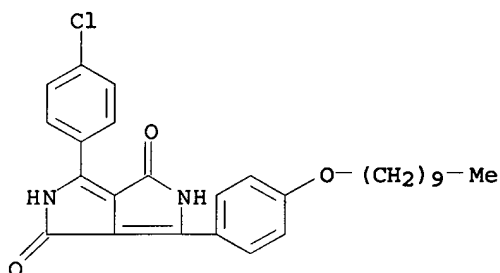
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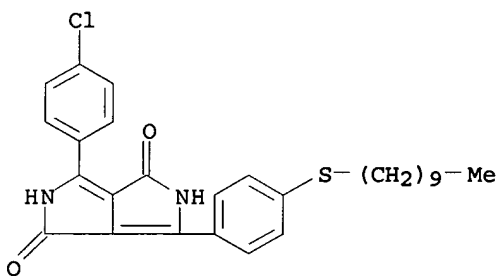
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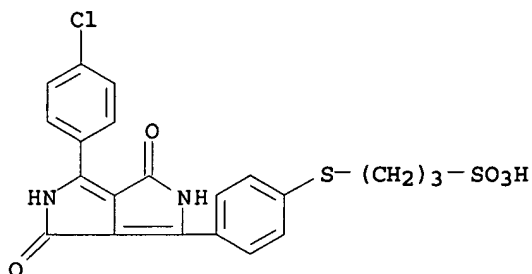
RN 850566-80-2 HCAPLUS

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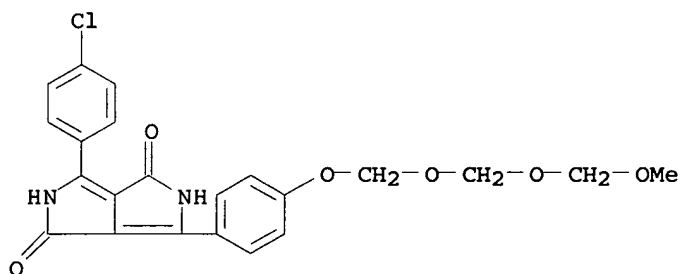
RN 850566-81-3 HCAPLUS

CN 1-Propanesulfonic acid, 3-[[4-[4-(4-chlorophenyl)-2,3,5,6-tetrahydro-3,6-dioxopyrrolo[3,4-c]pyrrol-1-yl]phenyl]thio]-, monosodium salt (9CI) (CA INDEX NAME)

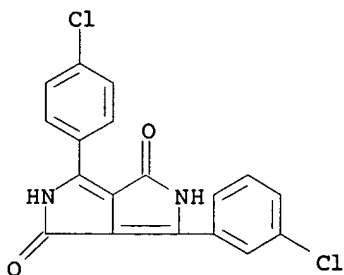


● Na

RN 850566-82-4 HCAPLUS  
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 [(methoxymethoxy)methoxy]methoxy]phenyl]- (9CI) (CA INDEX NAME)

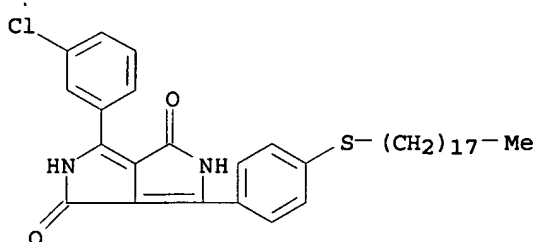


IT 88949-44-4P 850566-83-5P  
 RL: COS (Cosmetic use); IMF (Industrial manufacture); MOA (Modifier  
 or additive use); TEM (Technical or engineered material use); BIOL  
 (Biological study); PREP (Preparation); USES (Uses)  
 (strong orange dye; prodn. of heat-stable diketopyrrolopyrrole  
 pigment mixts. for cosmetics)  
 RN 88949-44-4 HCAPLUS  
 CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3-(3-chlorophenyl)-6-(4-  
 chlorophenyl)-2,5-dihydro- (9CI) (CA INDEX NAME)



RN 850566-83-5 HCAPLUS  
 CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3-(3-chlorophenyl)-2,5-dihydro-6-[4-  
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(octadecylthio)phenyl]- (9CI) (CA INDEX NAME)

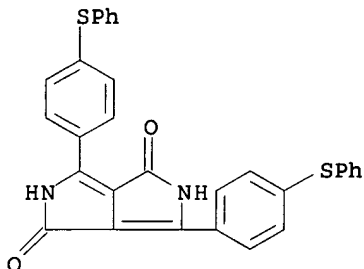


IT 646517-01-3P 850566-84-6P

RL: COS (Cosmetic use); IMF (Industrial manufacture); MOA (Modifier or additive use); TEM (Technical or engineered material use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (strong red dye; prodn. of heat-stable diketopyrrolopyrrole pigment mixts. for cosmetics)

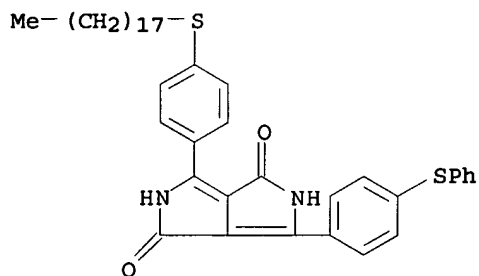
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CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-3,6-bis[4-(phenylthio)phenyl]- (9CI) (CA INDEX NAME)



RN 850566-84-6 HCAPLUS

CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-3-[4-(octadecylthio)phenyl]-6-[4-(phenylthio)phenyl]- (9CI) (CA INDEX NAME)



IC ICM C09B067-22

CC 41-8 (Dyes, Organic Pigments, Fluorescent Brighteners, and Photographic Sensitizers)

Section cross-reference(s): 28, 42, 62, 74

IT 105261-77-6P 850566-77-7P

RL: COS (Cosmetic use); IMF (Industrial manufacture); MOA (Modifier or additive use); TEM (Technical or engineered material use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(dark red pigment; prodn. of heat-stable diketopyrrolopyrrole pigment mixts. for cosmetics)

IT 850566-85-7

RL: COS (Cosmetic use); TEM (Technical or engineered material use); BIOL (Biological study); USES (Uses)  
(prodn. of heat-stable diketopyrrolopyrrole pigment mixts. for cosmetics)

IT 84632-65-5P 84632-66-6P 850566-72-2P  
850566-74-4P 850566-75-5P 850566-76-6P  
850566-78-8P 850566-79-9P 850566-80-2P  
850566-81-3P 850566-82-4P

RL: COS (Cosmetic use); IMF (Industrial manufacture); MOA (Modifier or additive use); TEM (Technical or engineered material use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(red pigment; prodn. of heat-stable diketopyrrolopyrrole pigment mixts. for cosmetics)

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RL: COS (Cosmetic use); IMF (Industrial manufacture); MOA (Modifier or additive use); TEM (Technical or engineered material use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(strong orange dye; prodn. of heat-stable diketopyrrolopyrrole pigment mixts. for cosmetics)

IT 646517-01-3P 850566-84-6P

RL: COS (Cosmetic use); IMF (Industrial manufacture); MOA (Modifier or additive use); TEM (Technical or engineered material use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(strong red dye; prodn. of heat-stable diketopyrrolopyrrole pigment mixts. for cosmetics)

REFERENCE COUNT: 20 THERE ARE 20 CITED REFERENCES AVAILABLE  
FOR THIS RECORD. ALL CITATIONS AVAILABLE  
IN THE RE FORMAT

L64 ANSWER 2 OF 42 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2004:467965 HCAPLUS

DOCUMENT NUMBER: 141:39722

TITLE: Preparation and use of formaldehyde-naphthalene sulfonic acid copolymer-containing nanosize pigment compositions

INVENTOR(S): Baebler, Fridolin

PATENT ASSIGNEE(S): Ciba Specialty Chemicals Holding Inc., Switz.

SOURCE: PCT Int. Appl., 27 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004048482	A1	20040610	WO 2003-EP50840	20031117

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU,

US 2004138349 A1 20040715 US 2003-714270

US 6902613                    B2        20050607  
CA 2505847                    AA        20040610        CA 2003-2505847

EP 1565532                  A1                  20050824                  EP 2003-796023

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC,  
PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU,  
SK

BR 2003016655 A 20051018 BR 2003-16655

US 2005145140            A1        20050707        US 2005-29958

PRIORITY APPLN. INFO.:

US 2002-430522P P

US 2003-714270 A1

WO 2003-EP50840 W

200311  
17

OTHER SOURCE(S): MARPAT 141:39722

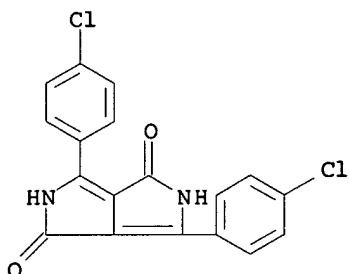
AB A nanosize pigment compn. as a particle growth and crystal phase director for the prepn. of a direct pigmentary org. pigment or in pigment finishing comprises 50-99 wt.% nanosize pigment with av. particle size of 1-100 nm selected from azo, azomethine, methine, anthraquinone, phthalocyanine, perinone, perylene, diketopyrrolopyrrole, thioindigo, thiazinindigo, dioxazine, iminoisoindoline, iminoisoindolinone, quinacridone, flavanthrone, indanthrone, anthrapyrimidine, and quinophthalone, and 1-50 wt.% low mol. wt. polysulfonated hydrocarbon, in particular naphthalene mono- or disulfonic acid formaldehyde polymer. Thus, formaldehyde and sodium naphthalene sulfonate were polymd. in the presence of quinacridone (Cromophthal Red 2020) to obtain quinacridone nanoparticles with av. size of 4-25 nm.

IT 84632-65-5, C.I. Pigment Red 254

RL: MOA (Modifier or additive use); USES (Uses)  
(Irgazin DPP Red B0; prepn. and application of  
formaldehyde-naphthalene **sulfonic** acid copolymer-contg.  
nanosize pigment compns.)

RN 84632-65-5 HCAPLUS

CN    Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis(4-chlorophenyl)-2,5-dihydro-  
       (9CI)    (CA INDEX NAME)



IC ICM C09B067-20

ICS C09B067-14

CC 41-3 (Dyes, Organic Pigments, Fluorescent Brighteners, and Photographic Sensitizers)

Section cross-reference(s): 25, 27, 42

IT 84632-65-5, C.I. Pigment Red 254

RL: MOA (Modifier or additive use); USES (Uses)

(Irgazin DPP Red B0; prepn. and application of formaldehyde-naphthalene sulfonic acid copolymer-contg. nanosize pigment compns.)

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L64 ANSWER 3 OF 42 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2004:333788 HCAPLUS

DOCUMENT NUMBER: 140:358989

TITLE: Method of coloring carrier materials for manufacture of effect pigments

INVENTOR(S): Mueller, Martin; Bauer, Didier

PATENT ASSIGNEE(S): Ciba Specialty Chemicals Holding Inc., Switz.

SOURCE: PCT Int. Appl., 55 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004033563	A2	20040422	WO 2003-EP10968	20031002
WO 2004033563	A3	20040902		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
CA 2497211	AA	20040422	CA 2003-2497211	

200310  
02  
EP 1549714 A2 20050706 EP 2003-767501  
200310  
02  
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC,  
PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU,  
SK  
BR 2003015176 A 20050823 BR 2003-15176  
200310  
02  
PRIORITY APPLN. INFO.: EP 2002-405868 A  
200210  
09  
WO 2003-EP10968 W  
200310  
02

## OTHER SOURCE(S): MARPAT 140:358989

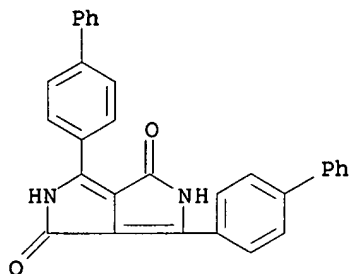
AB The present invention relates to a method of producing colored carrier particles (substrates), which comprises (a) dispersing the carrier particles in a soln. of a colorant or latent pigment, adding the carrier particles to a soln. of a colorant or latent pigment, or adding a latent pigment or a colorant to a dispersion of the carrier particles, (b) pptg. the colorant or latent pigment onto the carrier particles, and (c) in the case of a latent pigment, subsequently converting it to the pigment, and to the colored substrates obtainable by such a method, and also to the use thereof. Using the methods according to the invention it is possible to obtain colorations and colored substrates that have good light-fastness properties as effect pigments. A typical pigment was manufd. by mixing 11.6 g Al flakes with water contg. 1.2 g tetrakis(2-hydroxy-4-carboxyphenylsulfonamido) copper phthalocyanine at pH 11.6, acidifying to pH 8 in 5 min, neutralizing in 10 min, acidifying to pH 3.5 in 15 min, heating 2 h at 65°, cooling to room temp., and stirring an addnl. 2 h.

IT **88949-33-1DP**, C.I. Pigment Red 264, **chlorosulfonated**, reaction products with aminobenzoic acid, sodium salts  
**110893-33-9P 179984-66-8P**  
RL: IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)  
(colorant; coloring particulate supports for manuf. of effect pigments)

RN 88949-33-1 HCAPLUS

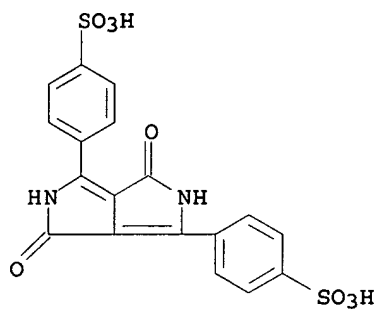
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis([1,1'-biphenyl]-4-yl)-2,5-dihydro- (9CI) (CA INDEX NAME)





RN 110893-33-9 HCAPLUS

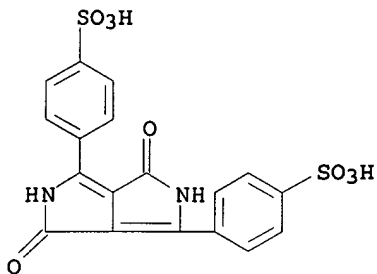
CN Benzenesulfonic acid, 4,4'-(2,3,5,6-tetrahydro-3,6-dioxopyrrolo[3,4-c]pyrrole-1,4-diyl)bis-, aluminum salt (3:2) (9CI) (CA INDEX NAME)



● 2/3 Al

RN 179984-66-8 HCAPLUS

CN Benzenesulfonic acid, 4,4'-(2,3,5,6-tetrahydro-3,6-dioxopyrrolo[3,4-c]pyrrole-1,4-diyl)bis-, calcium salt (1:1) (9CI) (CA INDEX NAME)



● Ca

IT 84632-65-5, C.I. Pigment Red 254 88949-33-1, C.I.

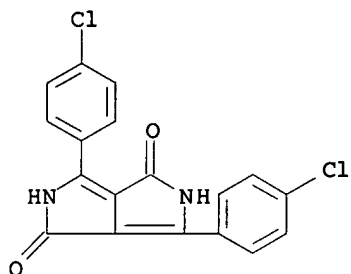
Pigment Red 264

RL: PEP (Physical, engineering or chemical process); PYP (Physical

process); TEM (Technical or engineered material use); PROC  
(Process); USES (Uses)  
(colorant; coloring particulate supports for manuf. of effect  
pigments)

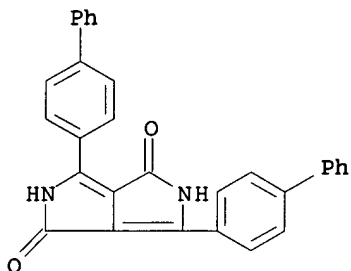
RN 84632-65-5 HCAPLUS

CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis(4-chlorophenyl)-2,5-dihydro-  
(9CI) (CA INDEX NAME)



RN 88949-33-1 HCAPLUS

CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis([1,1'-biphenyl]-4-yl)-2,5-dihydro- (9CI) (CA INDEX NAME)



IC ICM C09C001-64

ICS C09C001-62; C09C001-00; C09C003-08; C09D005-36; C09B069-00

CC 42-6 (Coatings, Inks, and Related Products)

IT 147-14-8DP, Copper phthalocyanine, carboxyphenylaminosulfonyl  
derivs. 150-13-ODP, 4-Aminobenzoic acid, reaction products with  
chlorosulfonated copper phthalocyanine, sodium salts 7440-23-5DP,  
Sodium, salts with reaction products with chlorosulfonated copper  
phthalocyanine 41425-46-1P 68259-05-2DP, calcium lake derivs.  
71566-54-6DP, calcium lake derivs. 88949-33-1DP, C.I.  
Pigment Red 264, chlorosulfonated, reaction products with  
aminobenzoic acid, sodium salts 88949-33-1DP,  
sulfonated, aluminum lake derivs. 109944-99-2DP, C.I.

Pigment Red 155, salts 110893-33-9P 117173-72-5P

179984-66-8P 681122-36-1P 681122-37-2P 681122-39-4P

681122-40-7DP, calcium lake derivs. 681144-71-8P 681215-24-7P

681215-25-8P 681215-26-9P

RL: IMF (Industrial manufacture); PEP (Physical, engineering or  
chemical process); PYP (Physical process); TEM (Technical or  
engineered material use); PREP (Preparation); PROC (Process); USES  
(Uses)

(colorant; coloring particulate supports for manuf. of effect  
pigments)

IT 147-14-8, C.I. Pigment Blue 15:3 5045-40-9, C.I. Pigment Yellow 109 5590-18-1, C.I. Pigment Yellow 110 84632-65-5, C.I. Pigment Red 254 88949-33-1, C.I. Pigment Red 264 167093-32-5 681144-69-4  
 RL: PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
 (colorant; coloring particulate supports for manuf. of effect pigments)

L64 ANSWER 4 OF 42 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2004:249640 HCAPLUS

DOCUMENT NUMBER: 140:272406

TITLE: Stable pigment compositions useful for gravure inks, paints, or color filters and dispersants therefor

INVENTOR(S): Oki, Shigeru; Yanagimoto, Hiromitsu

PATENT ASSIGNEE(S): Dainichiseika Color and Chemical Mfg. Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 15 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

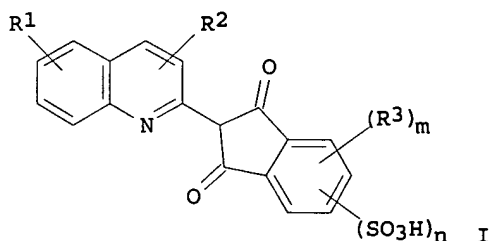
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 2004091497	A2	20040325	JP 2002-241979	20020822
PRIORITY APPLN. INFO.:			JP 2002-204540	A 20020712

OTHER SOURCE(S): MARPAT 140:272406

GI



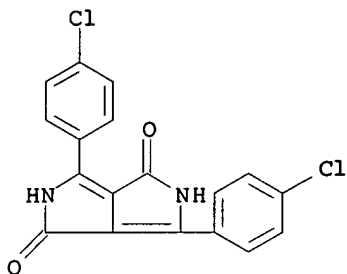
AB The dispersants are (quaternary ammonium salts, amine salts, or metal salts of) I [R1 = H, halo, OH, alkyl, (un)substituted aryl, (un)substituted phthalimide; R2 = H, OH; R3 = halo; m = 0-4; n = 0.5-4 (av. value)]. Comps. comprising pigments and the dispersions are also claimed. Thus, a polyamide gravure ink contg. C.I. Pigment Yellow 138 and I (R1, R2 = H; R3 = Cl; m = 4; n = 1.3; prepd. by sulfonation of tetrachloroquinophthalone), showed viscosity 281 and 289 mPa-sec, initially and after 7 days, resp., and high gross when coated.

IT 84632-65-5, C.I. Pigment Red 254

RL: TEM (Technical or engineered material use); USES (Uses)  
 (pigments; **sulfonated** quinophthalone derivs. as  
 dispersants for stable pigment compns. useful for gravure inks,  
 paints, or color filters)

RN 84632-65-5 HCAPLUS

CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis(4-chlorophenyl)-2,5-dihydro-  
 (9CI) (CA INDEX NAME)



IC ICM C09B067-20

ICS B01F017-12; C09B001-22; C09B033-147; C09B045-14; C09B045-22;  
 C09B047-10; C09B057-00; C09B057-04; C09B057-08; C09D011-02;  
 C09D017-00; G02B005-20

CC 42-5 (Coatings, Inks, and Related Products)

Section cross-reference(s): 41, 73

IT 1328-53-6, C.I. Pigment Green 7 4051-63-2, C.I. Pigment Red 177

14302-13-7, C.I. Pigment Green 36 25157-64-6, C.I. Pigment Yellow

150 36888-99-0, C.I. Pigment Yellow 139 52238-92-3, C.I. Pigment

Red 242 84632-65-5, C.I. Pigment Red 254

RL: TEM (Technical or engineered material use); USES (Uses)

(pigments; **sulfonated** quinophthalone derivs. as  
 dispersants for stable pigment compns. useful for gravure inks,  
 paints, or color filters)

L64 ANSWER 5 OF 42 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2004:117181 HCAPLUS

DOCUMENT NUMBER: 140:165502

TITLE: Compositions based on diketopyrrolopyrrole  
 pigments, their production and their use with  
 partially crystalline plastics

INVENTOR(S): Weber, Joachim; Hundsdorf, Thomas; Ganschow,  
 Matthias

PATENT ASSIGNEE(S): Clariant GmbH, Germany

SOURCE: Ger. Offen., 12 pp.

CODEN: GWXXBX

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 10235573	A1	20040212	DE 2002-10235573	20020803
WO 2004018566	A1	20040304	WO 2003-EP7025	20030702

W: CN, JP, KR, US  
 RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU,  
 IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR  
 EP 1529082 A1 20050511 EP 2003-792169

200307  
 02

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC,  
 PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, SK  
 JP 2005534794 T2 20051117 JP 2004-529989

200307  
 02

PRIORITY APPLN. INFO.:

DE 2002-10235573

A

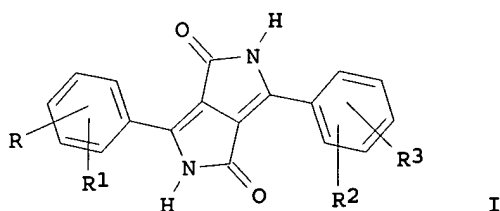
200208  
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WO 2003-EP7025

W

200307  
 02

OTHER SOURCE(S): MARPAT 140:165502  
 GI



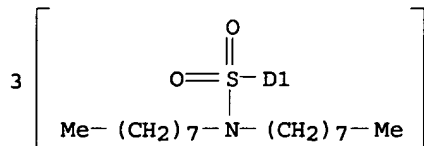
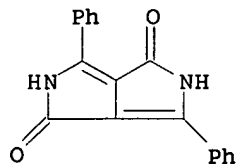
AB The invention concerns pigment compns. having at least one diarylpyrrolopyrroledione pigment (I; R, R1, R2, R3 = H, CN, Ph, C1-4-alkyl, C1-4-alkoxy) and at least one pigment dispersant in the form of a sulfonated I deriv. Such compns. are useful for uniform, defect-free mass coloration of plastics such as polyolefins. In an example, a mixt. of C.I. Pigment Red 254, water, tert-amyl alc., and a dispersant (a diphenylpyrrolopyrroledione with 3 dioctylaminosulfonyl groups) was processed into a press cake and used to color polyethylene which could be injection molded.

IT 654672-86-3

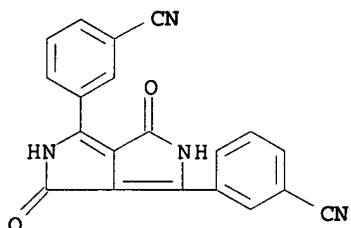
RL: TEM (Technical or engineered material use); USES (Uses)  
 (dispersant; in compns. based on  
 diketopyrrolopyrrole pigments for mass  
 coloration of plastics)

RN 654672-86-3 HCAPLUS

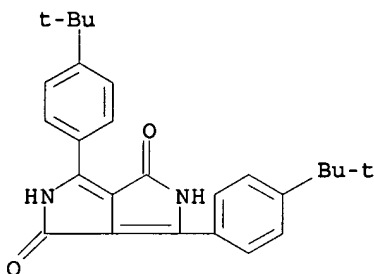
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-3,6-diphenyl-,  
 tris[(dioctylamino)sulfonyl] deriv. (9CI) (CA INDEX NAME)



IT 84632-50-8, C.I. Pigment Orange 71 84632-59-7,  
C.I. Pigment Orange 73  
RL: TEM (Technical or engineered material use); USES (Uses)  
(orange pigment; compns. based on diketopyrrolopyrrole pigments  
for mass coloration of plastics)  
RN 84632-50-8 HCAPLUS  
CN Benzonitrile, 3,3'-(2,3,5,6-tetrahydro-3,6-dioxopyrrolo[3,4-  
c]pyrrole-1,4-diyl)bis- (9CI) (CA INDEX NAME)

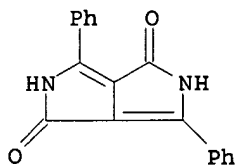


RN 84632-59-7 HCAPLUS  
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis[4-(1,1-  
dimethylethyl)phenyl]-2,5-dihydro- (9CI) (CA INDEX NAME)

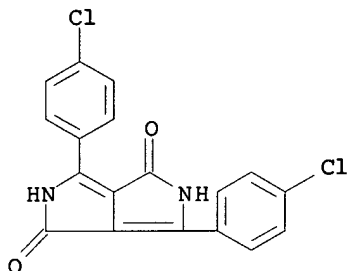


IT 54660-00-3, C.I. Pigment Red 255 84632-65-5, C.I.  
Pigment Red 254 88949-33-1, C.I. Pigment Red 264  
RL: TEM (Technical or engineered material use); USES (Uses)  
(red pigment; compns. based on diketopyrrolopyrrole pigments for  
mass coloration of plastics)

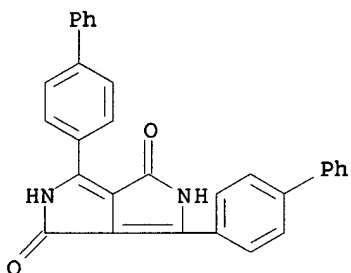
RN 54660-00-3 HCAPLUS  
 CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-3,6-diphenyl- (9CI)  
 (CA INDEX NAME)



RN 84632-65-5 HCAPLUS  
 CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis(4-chlorophenyl)-2,5-dihydro-  
 (9CI) (CA INDEX NAME)



RN 88949-33-1 HCAPLUS  
 CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis([1,1'-biphenyl]-4-yl)-2,5-dihydro- (9CI) (CA INDEX NAME)



IC ICM C09B067-22  
 ICS C09B067-02  
 CC 42-6 (Coatings, Inks, and Related Products)  
 Section cross-reference(s): 37  
 IT 654672-86-3  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (dispersant; in compns. based on  
 diketopyrrolopyrrole pigments for mass  
 coloration of plastics)  
 IT 84632-50-8, C.I. Pigment Orange 71 84632-59-7,  
 C.I. Pigment Orange 73  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (orange pigment; compns. based on diketopyrrolopyrrole pigments)

for mass coloration of plastics)  
IT 54660-00-3, C.I. Pigment Red 255 84632-65-5, C.I.  
Pigment Red 254 88949-33-1, C.I. Pigment Red 264  
RL: TEM (Technical or engineered material use); USES (Uses)  
(red pigment; compns. based on diketopyrrolopyrrole pigments for  
mass coloration of plastics)

L64 ANSWER 6 OF 42 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2003:710890 HCAPLUS  
DOCUMENT NUMBER: 139:246940  
TITLE: Pigment dispersions with good flowability and  
storage stability and varnishes containing them  
INVENTOR(S): Nogami, Takayuki; Chosokabe, Hiroshi; Uraki,  
Hisashi; Tanaka, Naohiro; Sawamura, Katsuhiko  
PATENT ASSIGNEE(S): Toyo Ink Mfg. Co., Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 14 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003253078	A2	20030910	JP 2002-56706	200203 04

PRIORITY APPLN. INFO.: JP 2002-56706 200203  
04

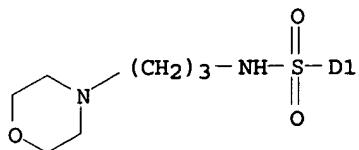
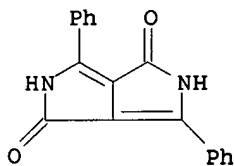
AB The dispersions contain pigments and dispersants which are obtained from ethylenically unsatd. monomers bearing phosphoric or sulfonic acid groups and ethylenically unsatd. monomers having bisphenol A or p-cumylphenol structure and ethylene oxide chains. Thus, dropping a mixt. of Me methacrylate 120, Bu methacrylate 210, 2-hydroxyethyl methacrylate 90, methacrylic acid 60, Aronix M 110 (ethoxylated p-cumylphenol acrylate) 120, acid phosphoxyethyl methacrylate 6 and AIBN 30 into cyclohexanone 1500 parts heated at 80° over 2 h and polymg. for another 3 h gave a copolymer with Mw 24,000. Mixing the resulting copolymer 5 with Pigment White 8, an anthraquinone pigment deriv. 5, an alkyd resin 25, melamine resin 10 and a thinner 50 parts gave a coating dispersion with viscosity 360 and 300 mPa·s at 6 and 60 rpm, resp.

IT 442532-88-9P  
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(pigments; pigment dispersions with good flowability and storage stability and varnishes contg. them)

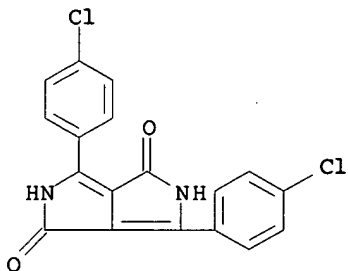
RN 442532-88-9 HCAPLUS

CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-3,6-diphenyl-,  
mono[[[3-(4-morpholinyl)propyl]amino]sulfonyl] deriv. (9CI) (CA  
INDEX NAME)





IT 84632-65-5, C.I. Pigment Red 254  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (pigments; pigment dispersions with good flowability and storage  
 stability and varnishes contg. them)  
 RN 84632-65-5 HCAPLUS  
 CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis(4-chlorophenyl)-2,5-dihydro-  
 (9CI) (CA INDEX NAME)



IC ICM C08L033-14  
 ICS C08F220-28; C08F290-06; C08K005-00; C08L055-00; C09B067-20;  
 C09B067-46; C09D017-00  
 CC 42-6 (Coatings, Inks, and Related Products)  
 Section cross-reference(s): 46  
 IT 59160-78-0P 68324-29-8P 125490-98-4P 442526-45-6P  
 442526-46-7P 442526-48-9P 442532-88-9P 544481-42-7P  
 574748-95-1P  
 RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical  
 or engineered material use); PREP (Preparation); USES (Uses)  
 (pigments; pigment dispersions with good flowability and storage  
 stability and varnishes contg. them)  
 IT 980-26-7, C.I. Pigment Red 122 1314-96-1, C.I. Pigment White 8  
 5281-04-9, C.I. Pigment Red 57:1 6358-85-6, C.I. Pigment Yellow 12  
 14302-13-7, C.I. Pigment Green 36 84632-65-5, C.I. Pigment  
 Red 254 215247-95-3, C.I. Pigment Violet 23 371759-37-4, C.I.  
 Pigment Blue 6  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (pigments; pigment dispersions with good flowability and storage  
 stability and varnishes contg. them)

L64 ANSWER 7 OF 42 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2003:607542 HCAPLUS  
 DOCUMENT NUMBER: 139:165914  
 TITLE: Pigment compositions and pigment dispersions  
 with good fluidity and disaggregation  
 INVENTOR(S): Nogami, Takayuki; Chousokabe, Hiroshi; Uraki,  
 Hisashi; Tanaka, Naohiro; Sawamura, Katsuhiko  
 PATENT ASSIGNEE(S): Toyo Ink Mfg. Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 14 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

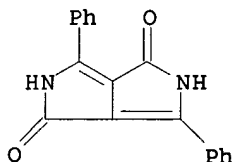
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003221545	A2	20030808	JP 2002-20582	20020129
PRIORITY APPLN. INFO.:				20020129

AB Title compns. comprise  $\geq 1$  compds. selected from pigment  
 derivs. having basic group, anthraquinone derivs. having basic  
 group, acridone derivs. having basic group, and triazine derivs.  
 having basic group, polymers comprising sulfone-contg. ethylenically  
 unsatd. monomers and ethylenically unsatd. monomers  
 $\text{CH}_2\text{:CR}_1\text{CO}_2(\text{R}_2\text{O})\text{nR}_3$ , and pigments, wherein  $\text{R}_1 = \text{H}$  or methyl;  $\text{R}_2 =$   
 $\text{C}_2\text{-4 alkyl}$ ;  $\text{R}_3 = \text{H}$ ,  $\text{C}_1\text{-30 alkyl}$ ,  $\text{CH}_2\text{CH:CH}_2$ , (substituted)phenyl, or  
 $\text{CO}_2\text{CR}_1\text{CH}_2$ ; and  $n = 2 - 100$  integer. Thus, a compn. comprising C.I.  
 Pigment Blue 15:3 8, copolymer with wt. av. mol. wt. 22,000 obtained  
 from Me methacrylate 30, Bu methacrylate 160, 2-hydroxyethyl  
 methacrylate 45, methacrylic acid 60, and Blemmer AP 550 90, 25%  
 2-acrylamido-2-methylpropanesulfonic acid soln. 38 parts 10, pigment  
 deriv. obtained from copper phthalocyanine and N,N-  
 dimethylaminopropylamine 2, alkyd resin 20, melamine resin 10, and  
 solvent 50% showed viscosity 510 mPa-s at 6 rpm and 450 mPa-s at 60  
 rpm, and TI value 1.13.

IT 54660-00-3DP, Pyrrolo[3,4-c]pyrrole-1,4-dione,  
 2,5-dihydro-3,6-diphenyl-, morpholinepropanamine  
 RL: IMF (Industrial manufacture); MOA (Modifier or additive use);  
 PREP (Preparation); USES (Uses)  
 (prepn. of pigment dispersions with good  
 fluidity and disaggregation)

RN 54660-00-3 HCAPLUS

CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-3,6-diphenyl- (9CI)  
 (CA INDEX NAME)

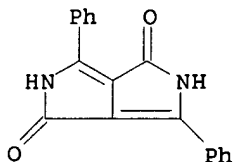


IT 54660-00-3, Pyrrolo[3,4-c]pyrrole-1,4-dione,  
 2,5-dihydro-3,6-diphenyl-  
 RL: RCT (Reactant); RACT (Reactant or reagent)

(reactant in pigment deriv. prepn.; prepn. of  
pigment dispersions with good fluidity and  
disaggregation)

RN 54660-00-3 HCAPLUS

CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-3,6-diphenyl- (9CI)  
(CA INDEX NAME)



IC ICM C09D017-00

CC 42-6 (Coatings, Inks, and Related Products)

IT 147-14-8DP, Copper phthalocyanine, amine derivs. 1047-16-1DP,  
Quinacridone, methylpiperazine derivs. 54660-00-3DP,  
Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-3,6-diphenyl-  
, morpholinepropanamine 215247-95-3DP, Pigment Violet 23, triazine  
derivs. 442526-45-6P 442526-46-7P 442526-47-8P 442526-48-9P  
574748-95-1P

RL: IMF (Industrial manufacture); MOA (Modifier or additive use);  
PREP (Preparation); USES (Uses)

(prepn. of pigment dispersions with good  
fluidity and disaggregation)

IT 62-53-3, Aniline, reactions 100-01-6, p-Nitroaniline, reactions  
104-78-9 109-01-3, N-Methylpiperazine 109-55-7 111-92-2,  
Dibutylamine 123-00-2, 4-Morpholinepropanamine 578-95-0,  
Acridone 1047-16-1, Quinacridone 1331-47-1, Dichlorobenzidine  
6470-87-7, Anthraquinone- $\beta$ -carbonyl chloride 27741-88-4  
54660-00-3, Pyrrolo[3,4-c]pyrrole-1,4-dione,  
2,5-dihydro-3,6-diphenyl- 186511-07-9 442526-49-0

RL: RCT (Reactant); RACT (Reactant or reagent)  
(reactant in pigment deriv. prepn.; prepn. of  
pigment dispersions with good fluidity and  
disaggregation)

L64 ANSWER 8 OF 42 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2003:470665 HCAPLUS

DOCUMENT NUMBER: 139:54325

TITLE: Pigment compositions and thermoplastic resin  
compositions/dispersions therefrom with good  
fluidity and dispersion stability as coloring  
materials

INVENTOR(S): Sawamura, Katsuhiko; Takahashi, Masakatsu

PATENT ASSIGNEE(S): Toyo Ink Mfg. Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 11 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

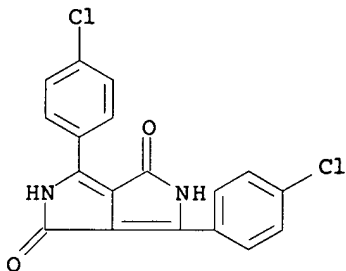
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

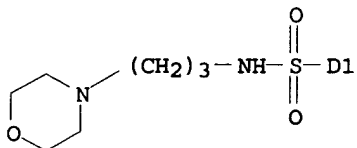
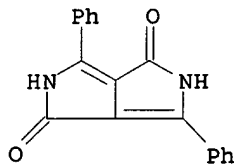
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003171594	A2	20030620	JP 2001-373723	20011207

200112  
07

CN    Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis(4-chlorophenyl)-2,5-dihydro-  
       (9CI)    (CA INDEX NAME)



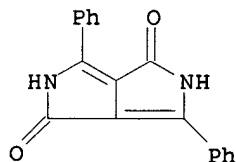
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-3,6-diphenyl-,  
mono[[[3-(4-morpholinyl)propyl]amino]sulfonyl] deriv. (9CI) (CA  
INDEX NAME)



RN 544481-45-0 HCAPLUS  
 CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-3,6-diphenyl-,  
 monosulfo deriv., compd. with 1-octadecanamine (1:1) (9CI) (CA  
 INDEX NAME)

CM 1

CRN 544481-44-9  
 CMF C18 H12 N2 O5 S  
 CCI IDS



D1-SO<sub>3</sub>H

CM 2

CRN 124-30-1  
 CMF C18 H39 N

H<sub>2</sub>N-(CH<sub>2</sub>)<sub>17</sub>-Me

IC ICM C09D017-00  
 ICS C09B067-20; C09B067-22; C09C003-06; C09C003-08  
 CC 42-6 (Coatings, Inks, and Related Products)  
 Section cross-reference(s): 37  
 IT 81-77-6, Pigment Blue 60 147-14-8, Pigment Blue 15:3 980-26-7,  
 Pigment Red 122 5281-04-9, Pigment Red 57:1 6358-85-6, Pigment  
 Yellow 12 84632-65-5, Pigment Red 254 215247-95-3,  
 Pigment Violet 23  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (org. pigments, on inorg. pigment surfaces; pigment compns. for

Ross Shipe EIC 1700 Remsen 4B31 571/272-6018

thermoplastic resin compns. or dispersions with good fluidity and dispersion stability as coloring materials)

IT 28901-96-4 442526-45-6 442526-46-7 442532-86-7 442532-87-8  
442532-88-9 544477-02-3 544477-03-4 544481-42-7  
544481-43-8 544481-45-0

RL: TEM (Technical or engineered material use); USES (Uses)  
(pigment compns. for thermoplastic resin compns. or dispersions with good fluidity and dispersion stability as coloring materials)

L64 ANSWER 9 OF 42 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2003:352124 HCAPLUS

DOCUMENT NUMBER: 138:355243

TITLE: Production of sulfonated solid particles and their use in colored compositions

INVENTOR(S): Nakamura, Michiei; Zama, Yoshiyuki; Okamoto, Hisao; Nogami, Atsushi; Sakai, Naoyuki; Koiso, Hideyuki

PATENT ASSIGNEE(S): Dainichiseika Color & Chemicals Mfg. Co. Ltd., Japan

SOURCE: Ger. Offen., 14 pp.

CODEN: GWXXBX

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO. -----	KIND ----	DATE -----	APPLICATION NO. -----	DATE
DE 10242875	A1	20030508	DE 2002-10242875	200209 16
JP 2003165926	A2	20030610	JP 2002-227251	200208 05
US 2003134938	A1	20030717	US 2002-243660	200209 16
US 6821334	B2	20041123		
TW 593571	B	20040621	TW 2002-91121279	200209 17
CN 1417268	A	20030514	CN 2002-154553	200209 19
PRIORITY APPLN. INFO.:			JP 2001-284955	A 200109 19

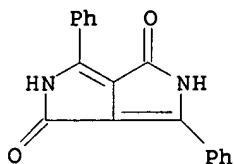
AB A procedure produces sulfonated solid particles such as org. or inorg. pigments by (1) burning sulfur to give SO<sub>2</sub> gas, (2) catalytically oxidizing the product to SO<sub>3</sub> gas, and (3) sulfonating dry powd. pigment material or granular solid particles with the SO<sub>3</sub> in a gas-solid phase reaction. The sulfonated particles have a good combination of stability and water miscibility, improving their suitability for printing. In an example, carbon black was sulfonated (3.1%) with SO<sub>3</sub> obtained as described.

IT 54660-00-3DP, C.I. Pigment Red 255, sulfonated  
84632-65-5DP, C.I. Pigment Red 254, sulfonated  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(prodn. of **sulfonated** solid particles and their use in colored compns.)

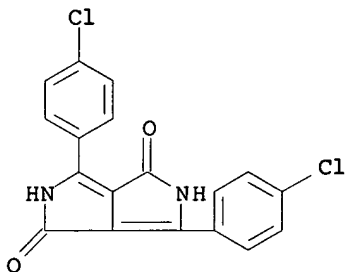
RN 54660-00-3 HCAPLUS

CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-3,6-diphenyl- (9CI)  
(CA INDEX NAME)



RN 84632-65-5 HCAPLUS

CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis(4-chlorophenyl)-2,5-dihydro-  
(9CI) (CA INDEX NAME)



IC ICM C09B067-16

ICS C09B067-08; C09B069-02; C09D011-16; C07B045-02

CC 42-6 (Coatings, Inks, and Related Products)

Section cross-reference(s): 41, 49

IT 147-14-8DP, C.I. Pigment Blue 15:3, sulfonated 980-26-7DP, C.I. Pigment Red 122, sulfonated 1047-16-1DP, C.I. Pigment Violet 19, sulfonated 4051-63-2DP, C.I. Pigment Red 177, sulfonated 4118-16-5DP, C.I. Pigment Yellow 147, sulfonated 51016-63-8DP, C.I. Pigment Yellow 173, sulfonated 54660-00-3DP, C.I. Pigment Red 255, **sulfonated 84632-65-5DP**, C.I. Pigment Red 254, **sulfonated 205531-45-9DP**, Acrylonitrile-divinylbenzene-2-hydroxyethyl methacrylate-styrene copolymer, sulfonated 215247-95-3DP, C.I. Pigment Violet 23, sulfonated

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(prodn. of **sulfonated** solid particles and their use in colored compns.)

L64 ANSWER 10 OF 42 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2002:832863 HCAPLUS

DOCUMENT NUMBER: 137:339041

TITLE: Water-soluble salts of sulfonamides as colorants for pigmenting of porous materials and for use in ink-jet printing

INVENTOR(S): Schacht, Hans-Thomas; Moegle, Gilbert

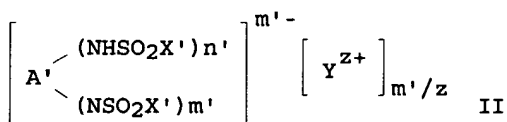
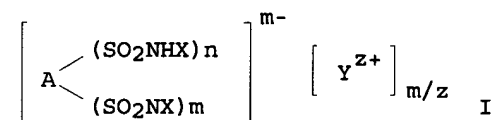
PATENT ASSIGNEE(S): Ciba Specialty Chemicals Holding Inc., Switz.

SOURCE: PCT Int. Appl., 69 pp.

CODEN: PIXXD2

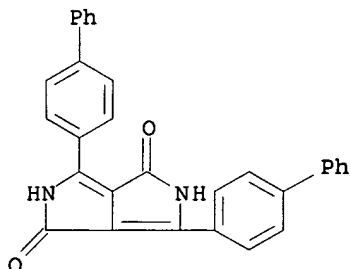
DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002085988	A1	20021031	WO 2002-EP4071	20020411
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
EP 1383837	A1	20040128	EP 2002-742887	20020411
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
JP 2004533504	T2	20041104	JP 2002-583510	20020411
US 2004138436	A1	20040715	US 2003-474937	20031016
PRIORITY APPLN. INFO.:				
			EP 2001-810383	A
			WO 2002-EP4071	W
OTHER SOURCE(S): MARPAT 137:339041				
GI				





- AB The invention relates to colorants I or II (A = chromophore radical; A' = amino group-contg. chromophore radical; X, X' = org. group; Y+ = alkali metal or ammonium cation; m, m' = 1-8; n, n' = 0-4, with m + n and m' + n' ≤ 8; z = 1-5, esp. 1). The colorants can be used for the pigmenting of porous materials and in ink-jet printing and, in the case of pigmenting, are converted to the insol. pigment form. In the pigmenting of porous materials, for example in the pigmenting of wood or anodized aluminum in the pores, the colorants yield very good penetration and fastness to light and, in ink-jet printing, yield very good water-resistance. In an example, C.I. Pigment Red 264 was chlorosulfonated and then treated with ethanolamine followed by aq. NaOH to give a pyrrolopyrroledione-based colored salt which could be used on obeche wood, providing a dark red shade.
- IT **88949-33-1DP**, C.I. Pigment Red 264, **chlorosulfonated**, reaction products with ethanolamine and sodium hydroxide  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(red colorant; prodn. of water-sol. colorants for wood, aluminum and jet-printing inks)
- RN 88949-33-1 HCAPLUS
- CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis([1,1'-biphenyl]-4-yl)-2,5-dihydro- (9CI) (CA INDEX NAME)



- IC ICM C09B069-02  
ICS C09B069-00; C09B067-44; C09B067-00; C09D011-00
- CC 41-1 (Dyes, Organic Pigments, Fluorescent Brighteners, and Photographic Sensitizers)  
Section cross-reference(s): 25, 27, 42, 43, 56, 78
- IT 141-43-5DP, Ethanolamine, reaction products with chlorosulfonated diarylpyrrolopyrroledione and sodium hydroxide 1310-73-2DP, Sodium hydroxide, reaction products with chlorosulfonated diarylpyrrolopyrroledione and ethanolamine 7790-94-5DP, Chlorosulfonic acid, reaction products with diarylpyrrolopyrroledione and ethanolamine and sodium hydroxide **88949-33-1DP**, C.I. Pigment Red 264, **chlorosulfonated**, reaction products with ethanolamine and sodium hydroxide  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(red colorant; prodn. of water-sol. colorants for wood, aluminum and jet-printing inks)
- REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L64 ANSWER 11 OF 42 HCAPLUS COPYRIGHT 2006 ACS on STN  
ACCESSION NUMBER: 2002:609545 HCAPLUS  
DOCUMENT NUMBER: 137:156105

TITLE: Acid pigment dispersants, their production and their use in pigment compositions  
 INVENTOR(S): Weber, Joachim; Wilker, Gerhard; Brychcy, Klaus; Dietz, Erwin  
 PATENT ASSIGNEE(S): Clariant Gmbh, Germany  
 SOURCE: Ger. Offen., 14 pp.  
 CODEN: GWXXBX  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 10106147	A1	20020814	DE 2001-10106147	20010210
WO 2002064680	A1	20020822	WO 2002-EP979	20020131
W: CN, JP, KR, US RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR				
EP 1362081	A1	20031119	EP 2002-703590	20020131
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY, TR				
JP 2004531593	T2	20041014	JP 2002-565002	20020131
ES 2236486	T3	20050716	ES 2002-2703590	20020131
US 2004060478	A1	20040401	US 2003-467578	20030808
US 6919958	B2	20050719		
PRIORITY APPLN. INFO.:			DE 2001-10106147	A 20010210
			WO 2002-EP979	W 20020131

OTHER SOURCE(S): MARPAT 137:156105

AB The invention concerns pigment dispersants of the type (GO3S)nQ[SO2N(R1CO2E)R2]s (E, G = H, metal cation, ammonium; Q = org. pigment chromophore; R1 = optionally substituted alkylene, cycloalkylene, arylene; R2 = H, R1H, R1CO2E; n = 0-4; s = 1-5). The dispersants are obtained by sulfochlorinating the appropriate pigment followed by treatment with an amino acid. In an example, 1,4-diketo-3,6-bis(4-biphenyl)pyrrolo[3,4-c]pyrrole (I) was sulfochlorinated and the product was condensed with  $\beta$ -alanine and hydrolyzed to give a pigment dispersant which was used in the prodn. of I pigment compns.

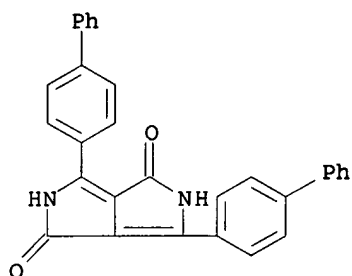
IT 88949-33-1DP, 1,4-Diketo-3,6-bis(4-biphenyl)pyrrolo[3,4-c]pyrrole, reaction products with chlorosulfonic acid and  $\beta$ -alanine, hydrolyzed

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(dispersant; prodn. of pigment-based dispersants for pigment manuf. and compns.)

RN 88949-33-1 HCAPLUS

CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis([1,1'-biphenyl]-4-yl)-2,5-dihydro- (9CI) (CA INDEX NAME)



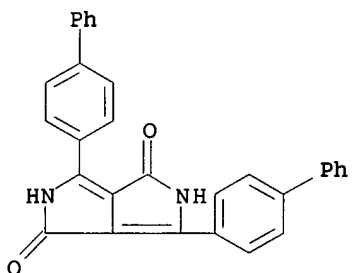
IT 88949-33-1P, 1,4-Diketo-3,6-bis(4-biphenylyl)pyrrolo[3,4-c]pyrrole

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(pigment; prodn. of pigment-based dispersants for pigment manuf. and compns.)

RN 88949-33-1 HCAPLUS

CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis([1,1'-biphenyl]-4-yl)-2,5-dihydro- (9CI) (CA INDEX NAME)



IC ICM C09B067-38

CC 41-5 (Dyes, Organic Pigments, Fluorescent Brighteners, and Photographic Sensitizers)

Section cross-reference(s): 27, 42, 78

IT 107-95-9DP,  $\beta$ -Alanine, reaction products with pigments and chlorosulfonic acid, hydrolyzed 147-14-8DP, C.I. Pigment Blue 15, reaction products with chlorosulfonic acid and  $\beta$ -alanine, hydrolyzed 7790-94-5DP, Chlorosulfonic acid, reaction products with pigments and  $\beta$ -alanine, hydrolyzed 88949-33-1DP, 1,4-Diketo-3,6-bis(4-biphenylyl)pyrrolo[3,4-c]pyrrole, reaction products with chlorosulfonic acid and  $\beta$ -alanine, hydrolyzed 215247-95-3DP, C.I. Pigment Violet 23, reaction products with chlorosulfonic acid and  $\beta$ -alanine, hydrolyzed

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

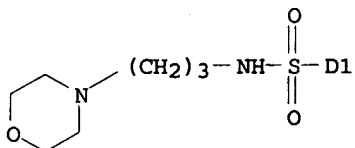
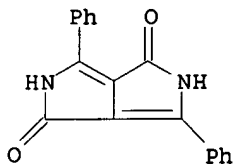
(dispersant; prodn. of pigment-based dispersants for pigment manuf. and compns.)  
 IT 1047-16-1DP, Pigment Violet 19, reaction products with chlorosulfonic acid and  $\beta$ -alanine, hydrolyzed  
 88949-33-1P, 1,4-Diketo-3,6-bis(4-biphenyl)pyrrolo[3,4-c]pyrrole  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (pigment; prodn. of pigment-based dispersants for pigment manuf. and compns.)

L64 ANSWER 12 OF 42 HCAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 2002:538303 HCAPLUS  
 DOCUMENT NUMBER: 137:95269  
 TITLE: Pigment compositions and their dispersions with good fluidity and dispersibility  
 INVENTOR(S): Sawamura, Katsuhiko; Chosokabe, Hiroshi; Uraki, Hisashi; Nogami, Takayuki  
 PATENT ASSIGNEE(S): Toyo Ink Mfg. Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 14 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

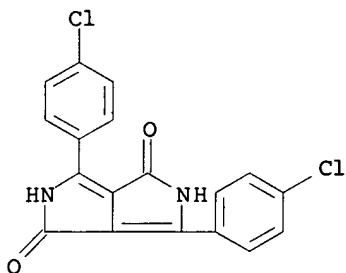
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 2002201378	A2	20020719	JP 2000-400537	20001228
PRIORITY APPLN. INFO.:				20001228

AB The compns., useful for offset inks, gravure inks, coatings, etc., comprise  $\geq 1$  basic group-contg. compd. chosen from pigment derivs., anthraquinone derivs., and triazine derivs., phosphoric acid group-contg. polymers, and pigments. Thus, a coating compn. contg. Pigment Blue 15:3 9, CuPcSO<sub>2</sub>NH(CH<sub>2</sub>)<sub>3</sub>NMe<sub>2</sub> (CuPc = Cu phthalocyanine residue) 1, acidophosphoxyethyl methacrylate-Bu methacrylate-2-hydroxyethyl methacrylate-methacrylic acid-Me methacrylate copolymer 2, alkyd resin 28, melamine resin 10, thinner 50% showed viscosity at 6 rpm and 60 rpm 900 and 720 cP, resp., and TI value 1.25.

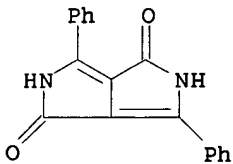
IT 442532-88-9  
 RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)  
 (dispersant; pigment compns. with good fluidity and dispersibility)  
 RN 442532-88-9 HCAPLUS  
 CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-3,6-diphenyl-, mono[[[3-(4-morpholinyl)propyl]amino]sulfonyl] deriv. (9CI) (CA INDEX NAME)



IT 84632-65-5, Pigment Red 254  
 RL: PRP (Properties); TEM (Technical or engineered material use);  
 USES (Uses)  
 (pigment; pigment compns. with good fluidity and dispersibility)  
 RN 84632-65-5 HCAPLUS  
 CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis(4-chlorophenyl)-2,5-dihydro-  
 (9CI) (CA INDEX NAME)



IT 54660-00-3  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (prepn. of pigment dispersants for pigment compns. with good  
 fluidity)  
 RN 54660-00-3 HCAPLUS  
 CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-3,6-diphenyl- (9CI)  
 (CA INDEX NAME)



IC ICM C09B067-46  
 ICS C09B001-00; C09B001-467; C09B017-00; C09B029-20; C09B029-33;  
 C09B035-035; C09B035-10; C09B047-16; C09B047-24; C09B048-00;  
 C09B057-00; C09B067-20; C09D011-00; C09D201-00  
 CC 42-6 (Coatings, Inks, and Related Products)

Section cross-reference(s): 28, 41

IT 68324-29-8 178481-37-3 185342-91-0 442526-45-6 442526-46-7  
 442526-47-8 442526-48-9 442532-86-7 442532-87-8  
 442532-88-9 442637-92-5

RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)  
 (dispersant; pigment compns. with good fluidity and dispersibility)

IT 980-26-7, Pigment Red 122 5281-04-9, Pigment Red 57:1 6358-85-6,  
 Pigment Yellow 12 12236-62-3, Pigment Orange 36 13463-67-7,  
 Pigment White 6, uses 14302-13-7, Pigment Green 36  
 84632-65-5, Pigment Red 254 371759-37-4, C.I. Pigment Blue 6

RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
 (pigment; pigment compns. with good fluidity and dispersibility)

IT 62-53-3, Aniline, reactions 100-01-6, p-Nitroaniline, reactions  
 104-78-9 108-77-0, Cyanuric chloride 109-01-3,  
 N-Methylpiperazine 109-55-7 111-92-2, Dibutylamine 123-00-2,  
 4-Morpholinepropanamine 1331-47-1, Dichlorobenzidine 3731-38-2,  
 Quinuclidone 6470-87-7 26576-46-5, 5-Acetoacetylaminobenzimidazolone 27741-88-4 54660-00-3  
 83372-61-6 186511-07-9 442526-49-0

RL: RCT (Reactant); RACT (Reactant or reagent)  
 (prepn. of pigment dispersants for pigment compns. with good fluidity)

L64 ANSWER 13 OF 42 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2002:538302 HCAPLUS

DOCUMENT NUMBER: 137:95268

TITLE: Pigment compositions and their dispersions with good fluidity and dispersibility

INVENTOR(S): Sawamura, Katsuhiko; Chosokabe, Hiroshi; Uraki, Hisashi; Nogami, Takayuki

PATENT ASSIGNEE(S): Toyo Ink Mfg. Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 13 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002201377	A2	20020719	JP 2000-400536	20001228
PRIORITY APPLN. INFO.:			JP 2000-400536	20001228

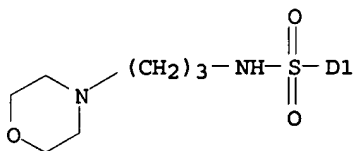
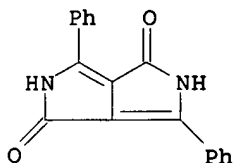
AB The compns., useful for offset inks, gravure inks, coatings, etc., comprise  $\geq 1$  basic group-contg. compd. chosen from pigment derivs., anthraquinone derivs., and triazine derivs., sulfonic acid group-contg. polymers, and pigments. Thus, a coating compn. contg. Pigment Blue 15:3 9, CuPcSO<sub>2</sub>NH(CH<sub>2</sub>)<sub>3</sub>NMe<sub>2</sub> (CuPc = Cu phthalocyanine residue) 1, 2-acrylamido-2-methylpropanesulfonic acid-Bu methacrylate-2-hydroxyethyl methacrylate-Me methacrylate copolymer 2, alkyd resin 28, melamine resin 10, thinner 50% showed viscosity at 6 rpm and 60 rpm 850 and 730 cP, resp., and TI value 1.16.

IT 442532-88-9

RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)  
(dispersant; pigment compns. with good fluidity and dispersibility)

RN 442532-88-9 HCAPLUS

CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-3,6-diphenyl-, mono[[[3-(4-morpholinyl)propyl]amino]sulfonyl] deriv. (9CI) (CA INDEX NAME)



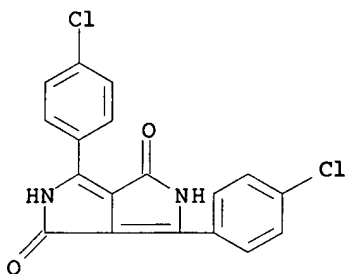
IT 84632-65-5, Pigment Red 254

RL: PRP (Properties); TEM (Technical or engineered material use);  
USES (Uses)

(pigment; pigment compns. with good fluidity and dispersibility)

RN 84632-65-5 HCAPLUS

CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis(4-chlorophenyl)-2,5-dihydro- (9CI) (CA INDEX NAME)

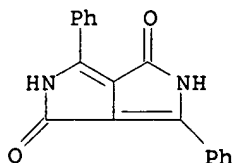


IT 54660-00-3

RL: RCT (Reactant); RACT (Reactant or reagent)  
(prepn. of pigment dispersants for pigment compns. with good fluidity)

RN 54660-00-3 HCAPLUS

CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-3,6-diphenyl- (9CI)  
(CA INDEX NAME)



IC ICM C09B067-46  
 ICS C09B001-00; C09B001-467; C09B017-00; C09B029-20; C09B029-33;  
 C09B035-035; C09B035-10; C09B047-16; C09B047-24; C09B048-00;  
 C09B057-00; C09B067-20; C09C003-08; C09C003-10; C09D011-00;  
 C09D201-00  
 CC 42-6 (Coatings, Inks, and Related Products)  
 Section cross-reference(s): 28, 41  
 IT 68324-29-8 178481-37-3 185342-91-0 442526-45-6 442526-46-7  
 442526-47-8 442526-48-9 442532-86-7 442532-87-8  
 442532-88-9 442637-92-5  
 RL: MOA (Modifier or additive use); TEM (Technical or engineered  
 material use); USES (Uses)  
 (dispersant; pigment compns. with good fluidity and  
 dispersibility)  
 IT 980-26-7, Pigment Red 122 5281-04-9, Pigment Red 57:1 6358-85-6,  
 Pigment Yellow 12 12236-62-3, Pigment Orange 36 13463-67-7,  
 Pigment White 6, uses 14302-13-7, Pigment Green 36  
 84632-65-5, Pigment Red 254 371759-37-4, C.I. Pigment Blue  
 6  
 RL: PRP (Properties); TEM (Technical or engineered material use);  
 USES (Uses)  
 (pigment; pigment compns. with good fluidity and dispersibility)  
 IT 62-53-3, Aniline, reactions 100-01-6, p-Nitroaniline, reactions  
 104-78-9 108-77-0, Cyanuric chloride 109-01-3,  
 N-Methylpiperazine 109-55-7 111-92-2, Dibutylamine 123-00-2,  
 4-Morpholinepropanamine 1047-16-1, Quinacridone 1331-47-1,  
 Dichlorobenzidine 6470-87-7 26576-46-5, 5-  
 Acetoacetylaminobenzimidazolone 27741-88-4 54660-00-3  
 83372-61-6 186511-07-9 442526-49-0  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (prepn. of pigment dispersants for pigment compns. with good  
 fluidity)

L64 ANSWER 14 OF 42 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2002:381428 HCAPLUS

DOCUMENT NUMBER: 136:403154

TITLE: Plastic-staining agents containing dye compounds  
 bearing sulfonate groups and method for their  
 use

INVENTOR(S): Omura, Toru; Uekubo, Takashi

PATENT ASSIGNEE(S): Toyo Ink MFG. Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 10 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002146223	A2	20020522	JP 2000-344561	200011



PRIORITY APPLN. INFO.:

JP 2000-344561

13

200011

13

OTHER SOURCE(S): MARPAT 136:403154

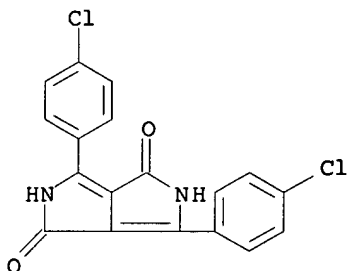
AB The agents contain org. pigments and  $P(SO_3M)_m(XNR_1R_2)_n$  (P = groups derived from org. colorants; X =  $SO_2$ , CO,  $CH_2$  or  $CH_2NHCOCH_2$  linking groups;  $R_1$ ,  $R_2$  = H, alkyl provided that at least 1 is  $C_{12-30}$  alkyl; M = salt forming cations; m = 0-2; n = 1-3) type compds. and are used to stain plastics of polyolefin-type. Thus, mixing a chlorosulfonated Cu phthalocyanine compd. in i-PrOH with Farmin D 86 (di- $C_{16-18}$ -alkylamines) and dimethylaminoethanol gave a dye (I), 20 parts of which was combined with C.I. Pigment Blue 15:1 100, and MeOH 400 parts, mixed at 50° for 1 h, filtered, washed and dried to give a dry color. Injection molding Hizec 2208 (HDPE) contg. 0.2 phr the dry color gave test pieces with mold shrinkage 13.6%, vs. 35.2% in the absence of the I in the dry color.

IT 84632-65-5, Irgazin DPP Red BO

RL: TEM (Technical or engineered material use); USES (Uses)  
(org. pigments; plastic-staining agents contg. dye compds.  
bearing sulfonate groups and method for their use)

RN 84632-65-5 HCAPLUS

CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis(4-chlorophenyl)-2,5-dihydro-  
(9CI) (CA INDEX NAME)

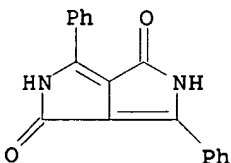


IT 54660-00-3DP, C.I. Pigment Red 255, chlorosulfonated or chloromethylated products, salts 88949-33-1DP, C.I. Pigment Red 264, chlorosulfonated or chloromethylated products, salts

RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(plastic-staining agents contg. dye compds. bearing  
sulfonate groups and method for their use)

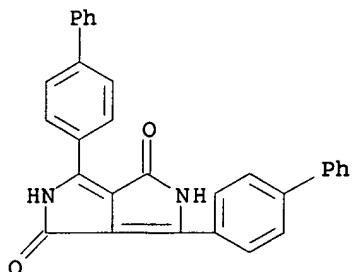
RN 54660-00-3 HCAPLUS

CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-3,6-diphenyl- (9CI)  
(CA INDEX NAME)



RN 88949-33-1 HCAPLUS

CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis([1,1'-biphenyl]-4-yl)-2,5-dihydro- (9CI) (CA INDEX NAME)



IC ICM C09B067-20  
ICS C09B067-20; C08J003-22; C08K005-00; C08K005-098; C08K005-5398;  
C08L023-00

CC 41-8 (Dyes, Organic Pigments, Fluorescent Brighteners, and  
Photographic Sensitizers)  
Section cross-reference(s): 38

IT 84632-65-5, Irgazin DPP Red BO  
RL: TEM (Technical or engineered material use); USES (Uses)  
(org. pigments; plastic-staining agents contg. dye compds.  
bearing **sulfonate** groups and method for their use)

IT 81-77-6DP, C.I. Pigment Blue 60, chlorosulfonated or  
chloromethylated products, salts 108-01-0DP, Dimethylaminoethanol,  
salts with dye compds. 121-44-8DP, Triethylamine, salts with dye  
compds. 124-30-1DP, Farmin 80, salts with dye compds.  
147-14-8DP, C.I. Pigment Blue 15, chlorosulfonated or  
chloromethylated products, salts 475-71-8DP, C.I. Pigment Yellow  
24, chlorosulfonated or chloromethylated products, salts  
980-26-7DP, C.I. Pigment Red 122, chlorosulfonated or  
chloromethylated products, salts 1047-16-1DP, C.I. Pigment Violet  
19, chlorosulfonated or chlorocarbonyl derivs., salts 3049-71-6DP,  
C.I. Pigment Red 178, chlorosulfonated or chloromethylated products,  
salts 4216-01-7DP, C.I. Pigment Yellow 108, chlorosulfonated or  
chloromethylated products, salts 4378-61-4DP, C.I. Pigment Red  
168, chlorosulfonated or chloromethylated products, salts  
5521-31-3DP, C.I. Pigment Red 179, chlorosulfonated or  
chloromethylated products, salts **54660-00-3DP**, C.I.  
Pigment Red 255, **chlorosulfonated** or chloromethylated  
products, salts **88949-33-1DP**, C.I. Pigment Red 264,  
**chlorosulfonated** or chloromethylated products, salts  
215247-95-3DP, C.I. Pigment Violet 23, chlorosulfonated or  
chloromethylated products, salts  
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical  
or engineered material use); PREP (Preparation); USES (Uses)  
(plastic-staining agents contg. dye compds. bearing  
**sulfonate** groups and method for their use)

L64 ANSWER 15 OF 42 HCAPLUS COPYRIGHT 2006 ACS on STN  
ACCESSION NUMBER: 2002:107457 HCAPLUS  
DOCUMENT NUMBER: 136:152661  
TITLE: Dispersant compositions improving heat stability  
of transparent pigments  
INVENTOR(S): De Keyzer, Gerardus  
PATENT ASSIGNEE(S): Ciba Specialty Chemicals Holding Inc., Switz.  
SOURCE: PCT Int. Appl., 23 pp.  
CODEN: PIXXD2

W: AE, AL, AM, AT, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN,  
 CU, CZ, CZ, DE, DE, DK, DK, EE, ES, FI, FI, GB, GD, GE, GH,  
 GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK,  
 LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT,  
 RO, RU, SD, SE, SG, SI, SK, SK, SL, TJ, TM, TR, TT, UA, UG,  
 US, UZ, VN, YU, ZA, ZW  
 RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC,  
 NL, PT, SE

AT 407235	B	20010125	AT 1999-724	199904 23
CA 2370949	AA	20001102	CA 2000-2370949	200004 06
CA 2370949	C	20040817		
BR 2000009987	A	20020122	BR 2000-9987	200004 06
JP 2002542081	T2	20021210	JP 2000-613630	200004 06
JP 3574621	B2	20041006		
EP 1173315	A1	20020123	EP 2000-918553	200004 08
EP 1173315	B1	20030319		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
AU 750085	B2	20020711	AU 2000-39448	200004 08
AU 2000039448	A5	20001110		
AT 234712	E	20030415	AT 2000-918553	200004 08
ZA 2001010561	A	20020828	ZA 2001-10561	200110 19
PRIORITY APPLN. INFO.:			AT 1999-724	A 199904 23
			AT 2000-918553	EP 200004 08
			WO 2000-AT83	W 200004 08

AB The invention relates to a device for continuously recycling synthetic material, preferably polyester, having a first receptacle for the material in which moving tools are arranged that \*\*\*comminute\*\*\* and/or mix said material. The pretreated material is transported from this receptacle, via a \*\*\*channel\*\*\* that can be \*\*\*vacuum\*\*\* sealed, and into a second receptacle whose interior can be evacuated. Tools which also move and which process the material are provided in this second receptacle. The material is removed from the second receptacle by means of a screw device. Another screw is mounted in the \*\*\*channel\*\*\* and has spirals which convey the material out of the first receptacle and into the second receptacle. At least one blocking element which is situated in the flow of the conveyed material is provided in the \*\*\*channel\*\*\* between the spirals of the other screw and the second receptacle. This enables the second receptacle to be

DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002010288	A1	20020207	WO 2001-EP8564	20010724
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
TW 593567	B	20040621	TW 2001-90115576	20010627
EP 1305371	A1	20030502	EP 2001-969501	20010724
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R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
JP 2004505157	T2	20040219	JP 2002-516013	20010724
AT 286942	E	20050115	AT 2001-969501	20010724
US 2002016999	A1	20020214	US 2001-916898	20010727
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			WO 2001-EP8564	W
				20010724

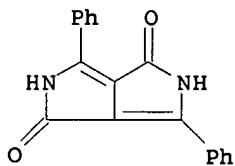
OTHER SOURCE(S): MARPAT 136:152661

AB The present invention relates to compns. comprising a sulfonated diketopyrrolopyrrole and a Mannich-type substituted dihydroquinacridone. Such compns. are excellently suitable for dispersing fine-sized pigments (esp. diketopyrrolopyrrole pigments) into polymers. They lead to pigmentations of increased stability at high temps. Examples were given which used a phthalimidomethyl-6,13-dihydroquinacridone stabilizer/dispersant with C.I. Pigment Red 254.

IT **54660-00-3D**, 3,6-Diphenyl-2,5-dihydropyrrolo[3,4-c]pyrrole-1,4-dione, **sulfonated**, salts

RL: TEM (Technical or engineered material use); USES (Uses) (dispersants for improving heat stability of transparent pigments)

RN 54660-00-3 HCAPLUS  
 CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-3,6-diphenyl- (9CI)  
 (CA INDEX NAME)



IC ICM C09B067-00  
 CC 41-5 (Dyes, Organic Pigments, Fluorescent Brighteners, and  
 Photographic Sensitizers)  
 Section cross-reference(s): 37  
 IT 54660-00-3D, 3,6-Diphenyl-2,5-dihydropyrrolo[3,4-c]  
 pyrrole-1,4-dione, sulfonated, salts  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (dispersants for improving heat stability of  
 transparent pigments)

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR  
 THIS RECORD. ALL CITATIONS AVAILABLE IN  
 THE RE FORMAT

L64 ANSWER 16 OF 42 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2001:760061 HCAPLUS  
 DOCUMENT NUMBER: 135:319627  
 TITLE: Preparation of water-based sulfonated pigment  
 dispersion and use thereof  
 INVENTOR(S): Uemura, Toshiyuki; Kaneda, Jun; Suzuki, Eriko;  
 Negishi, Takashi; Aida, Seiji  
 PATENT ASSIGNEE(S): Toyo Ink Manufacturing Co., Ltd., Japan  
 SOURCE: Eur. Pat. Appl., 48 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1146094	A2	20011017	EP 2001-302034	20010306
EP 1146094	A3	20020313		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
JP 2002121460	A2	20020423	JP 2000-375362	20001211
JP 2002121419	A2	20020423	JP 2001-12581	20010122
JP 2002241638	A2	20020828	JP 2001-48950	20010223
US 2001029870	A1	20011018	US 2001-797827	20010305

US 6648954	B2	20031118		
PRIORITY APPLN. INFO.:			JP 2000-59754	A
				200003 06
			JP 2000-77499	A
				200003 21
			JP 2000-241015	A
				200008 09
			JP 2000-241016	A
				200008 09
			JP 2000-375362	A
				200012 11
			JP 2000-375363	A
				200012 11
			JP 2001-12581	A
				200101 22

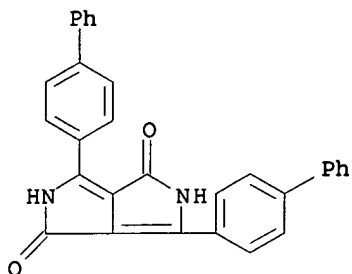
AB An aq. pigment dispersion comprising: (a) 100 parts by wt. of a pigment; (b) 3 to 30 parts by wt. of at least one sulfonic acid group-contg. deriv. of a pigment of the same pigment type as (a); and (c) water, wherein (i) component (b) comprises a pigment deriv. which has only one sulfonic acid group in each mol., (ii) at least part of the pigment deriv. (b) is present, in the dispersion, in the form of a sulfonic acid salt selected from an ammonium salt, an org. amine salt and a salt with a monovalent metal, provided that at least 15% of the sulfonic acid groups do not form a salt with the monovalent metal, and (iii) the dispersion contains 500 ppm or less of solid metal ions having a valence of at least 2. The pigments are selected from a group comprising phthalocyanine pigment, quinacridone pigment, quinacridonequinone pigment, isoindolinone pigment, quinophthalone pigment, diketopyrrolopyrrole pigment, perylene pigment, perinone pigment, indigo pigment, thioindigo pigment, diozadine pigment, anthraquinone pigment, pyranthrone pigment, anthanthrone pigment, flavanthrone pigment, indanthrone pigment, benzimidazolone pigment, azo pigment, and fused azo pigment.

IT **88949-33-1DP**, C.I. Pigment red 264, **sulfonated**  
 RL: IMF (Industrial manufacture); MOA (Modifier or additive use);  
 TEM (Technical or engineered material use); PREP (Preparation); USES  
 (Uses)

(pigment; prepn. of water-based **sulfonated** pigment  
 dispersion and use thereof)

RN 88949-33-1 HCAPLUS

CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis([1,1'-biphenyl]-4-yl)-2,5-dihydro- (9CI) (CA INDEX NAME)



IC ICM C09D011-00  
ICS C09B067-22  
CC 42-12 (Coatings, Inks, and Related Products)  
Section cross-reference(s): 41  
IT 147-14-8DP, C.I. Pigment blue 15:3, sulfonated 1047-16-1DP, C.I. Pigment violet 19, sulfonated 3089-17-6DP, C.I. Pigment red 202, sulfonated 35636-63-6DP, C.I. Pigment yellow 175, sulfonated 68399-99-5DP, C.I. Pigment orange 60, sulfonated 71819-76-6DP, C.I. Pigment red 206, sulfonated 88949-33-1DP, C.I. Pigment red 264, sulfonated 367255-49-0P 367510-26-7P 367510-29-0P 367510-31-4P 367510-32-5P 367512-82-1P  
RL: IMF (Industrial manufacture); MOA (Modifier or additive use); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(pigment; prepn. of water-based sulfonated pigment dispersion and use thereof)

L64 ANSWER 17 OF 42 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2001:541646 HCAPLUS

DOCUMENT NUMBER: 135:123834

TITLE: Sulfonated anthraquinonylaminotriazine pigment dispersants and pigment compositions containing them

INVENTOR(S): Ohki, Shigeru; Soga, Takayuki; Aoki, Kazutaka; Takami, Shotoku; Okamoto, Hisao; Saikatsu, Hiroaki; Yamamiya, Shirou

PATENT ASSIGNEE(S): Dainichiseika Color & Chemicals Mfg. Co. Ltd., Japan

SOURCE: Eur. Pat. Appl., 19 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

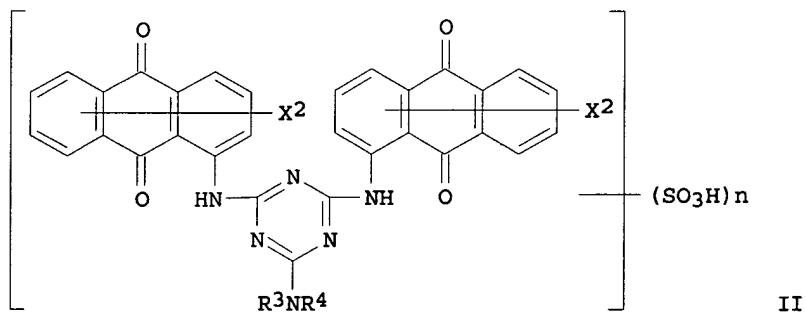
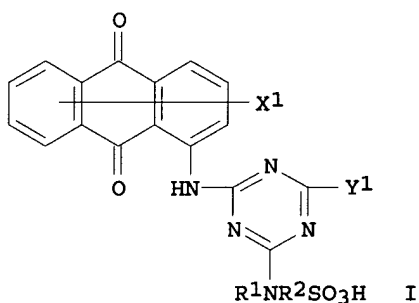
LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1118641	A1	20010725	EP 2001-100740	20010112
EP 1118641	B1	20020710		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
JP 2001271004	A2	200111002	JP 2000-359904	20001127
ES 2179817	T3	20030201	ES 2001-1100740	

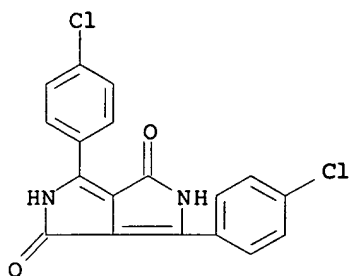
US 2001013303	A1	20010816	US 2001-759330	200101 12
US 6471766	B2	20021029		200101 16
CN 1310205	A	20010829	CN 2001-104937	
				200101 20
TW 538099	B	20030621	TW 2001-90100796	
				200102 09
PRIORITY APPLN. INFO.:		JP 2000-14213	A	200001 20
OTHER SOURCE(S):	MARPAT 135:123834			
GI				



AB Pigment dispersants are comprised of I ( $R_1 = H$ , optionally substituted alkyl or Ph;  $R_2 =$  optionally substituted alkylene, phenylene, or naphthylene;  $X_1 = H$ , halogen, alkyl, acylamino;  $Y_1 =$  anthraquinonylamino, phenylamino, naphthylamino, phenoxy) or II ( $R_3 = H$ , optionally substituted alkyl or Ph;  $R_4 =$  optionally substituted Ph or naphthyl;  $X_2 = H$ , halogen, optionally substituted alkyl;  $n = 0.5-2$ ) or their metal, ammonium or amine salts. Pigment compns., such as colorants for gravure inks, paints, or color filters, comprise pigments and the pigment dispersants. The dispersants reduce flocculation of the pigment compns. In an example, 1-aminoanthraquinone and cyanuric chloride were condensed (2:1) and the product was heated with taurine to give a dispersant.



IT 84632-65-5, C.I. Pigment Red 254  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (red pigment; prodn. of **sulfonated**  
 anthraquinonylamino triazine pigment dispersants for)  
 RN 84632-65-5 HCAPLUS  
 CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis(4-chlorophenyl)-2,5-dihydro-  
 (9CI) (CA INDEX NAME)



IC ICM C09B067-00  
 ICS C09B067-46  
 CC 41-4 (Dyes, Organic Pigments, Fluorescent Brighteners, and  
 Photographic Sensitizers)  
 Section cross-reference(s): 42, 46  
 IT 4051-63-2, C.I. Pigment Red 177 5280-68-2, C.I. Pigment Red 146  
 68016-05-7, C.I. Pigment Red 245 84632-65-5, C.I. Pigment  
 Red 254  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (red pigment; prodn. of **sulfonated**  
 anthraquinonylamino triazine pigment dispersants for)  
 REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR  
 THIS RECORD. ALL CITATIONS AVAILABLE IN  
 THE RE FORMAT

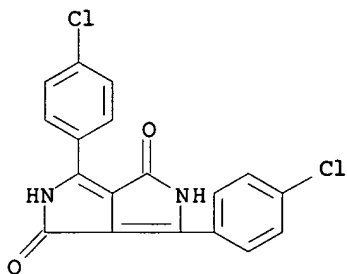
L64 ANSWER 18 OF 42 HCAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 2001:516195 HCAPLUS  
 DOCUMENT NUMBER: 135:108736  
 TITLE: Oily red pigment dispersions and their writing  
 inks  
 INVENTOR(S): Hatase, Yoshiteru  
 PATENT ASSIGNEE(S): Orient Chemical Industries, Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 11 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2001192596	A2	20010717	JP 2000-328801	200010 27
PRIORITY APPLN. INFO.:			JP 1999-306799	A 199910 28

AB Title dispersions contain alc. solvents, pigment-dispersing resins

(A), and diketo pyrrolo pyrrole red pigments (B) at B/A of 0.5-5. A dispersion comprising Ph glycol, benzyl alc., 360 g Irgazin DPP Red BO, and 144 g S-Lec BL 1 showed a viscosity change of 5.7% after 1 mo at 50°, which was used to form an ink with smooth writability.

IT 84632-65-5, Irgazin DPP Red BO  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (storage-stable oily diketo **pyrrolopyrrole** red  
**pigment dispersions** for writing inks)  
 RN 84632-65-5 HCAPLUS  
 CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis(4-chlorophenyl)-2,5-dihydro-  
 (9CI) (CA INDEX NAME)



IC ICM C09D011-16  
 ICS C09B057-00; C09B067-20; C09B067-46  
 CC 42-12 (Coatings, Inks, and Related Products)  
 IT 84632-65-5, Irgazin DPP Red BO 350249-34-2, Irgazin Red  
 2031  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (storage-stable oily diketo **pyrrolopyrrole** red  
**pigment dispersions** for writing inks)

L64 ANSWER 19 OF 42 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2001:416515 HCAPLUS

DOCUMENT NUMBER: 135:20892

TITLE: Pigment dispersants based on  
 diketopyrrolopyrrole compounds, their production  
 and their use

INVENTOR(S): Weber, Joachim; Grimm, Felix Wendelin; Dietz,  
 Erwin

PATENT ASSIGNEE(S): Clariant Gmbh, Germany

SOURCE: Eur. Pat. Appl., 24 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

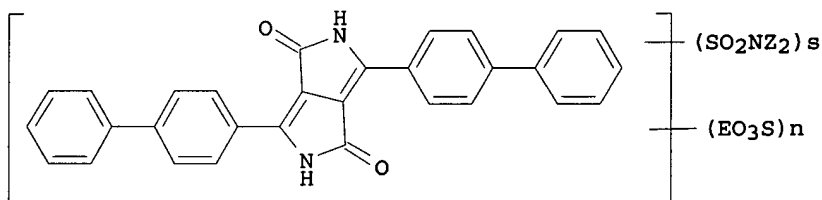
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1104789	A2	20010606	EP 2000-124596	200011 10
EP 1104789	A3	20031029		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
DE 19958181	A1	20010607	DE 1999-19958181	

Ross Shipe EIC 1700 Remsen 4B31 571/272-6018

JP 2001214085	A2	20010807	JP 2000-362974	19991202
US 2001008912	A1	20010719	US 2000-727960	20001129
US 2003162976	A1	20030828	US 2003-375573	20001201
US 2003162977	A1	20030828	US 2003-375668	20030227
US 2004177790	A1	20040916	US 2004-807634	20030227
PRIORITY APPLN. INFO.:				20040324
		DE 1999-19958181	A	19991202
		US 2000-727960	B1	20001201
		US 2003-375573	A3	20030227

OTHER SOURCE(S): MARPAT 135:20892  
GI

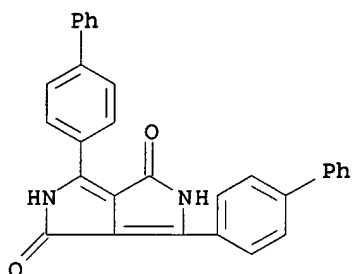


- AB Pyrrolopyrroledione sulfo derivs. (I; E = H, metal, ammonium; Z = org. group; n = 0-2; s = 0.1-4.0) are obtained for use as dispersants for diketopyrrolopyrrole pigments, enabling facilitated dispersion of the pigments in coatings and plastics. I are prepd. by chlorosulfonating the diketopyrrolopyrrole and then condensing with the desired amine. In an example, 1,4-diketo-3,6-bis(4-biphenyl)pyrrolo[3,4-c]pyrrole was treated with chlorosulfonic acid and thionyl chloride to give a chlorosulfonated product, which was then condensed with 3-(dimethylamino)-1-propylamine to give a dispersant. This dispersant was used with C.I. Pigment Red 264 in the prodn. of a coating.
- IT **88949-33-1DP, chlorosulfonated**, reaction products with amines  
RL: IMF (Industrial manufacture); TEM (Technical or engineered)

material use); PREP (Preparation); USES (Uses)  
 (dispersants; prodn. of dispersants for  
 pyrrolopyrroledione-based pigments)

RN 88949-33-1 HCAPLUS

CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis([1,1'-biphenyl]-4-yl)-2,5-dihydro- (9CI) (CA INDEX NAME)

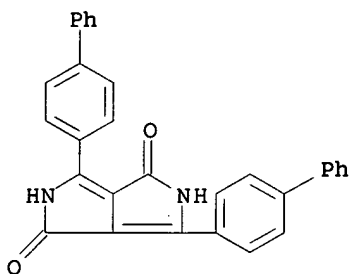


IT 88949-33-1, C.I. Pigment Red 264

RL: TEM (Technical or engineered material use); USES (Uses)  
 (red pigment; prodn. of dispersants for  
 pyrrolopyrroledione-based pigments)

RN 88949-33-1 HCAPLUS

CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis([1,1'-biphenyl]-4-yl)-2,5-dihydro- (9CI) (CA INDEX NAME)



IC ICM C09B067-22

ICS C09B057-00; C08K005-3415

CC 41-5 (Dyes, Organic Pigments, Fluorescent Brighteners, and  
 Photographic Sensitizers)

Section cross-reference(s): 42, 46

IT 96-20-8P, 2-Amino-1-butanol 102-83-0P, 3-(Dibutylamino)-1-propylamine 104-78-9P, 3-(Diethylamino)-1-propylamine 109-55-7DP, 3-(Dimethylamino)-1-propylamine, reaction products with chlorosulfonated biphenylpyrrolopyrrolediones 111-41-1P, N-(2-Aminoethyl)ethanolamine 121-05-1P, 2-(Diisopropylamino)ethylamine 123-00-2DP, N-(3-Aminopropyl)morpholine, reaction products with chlorosulfonated biphenylpyrrolopyrrolediones 140-31-8DP, N-(2-Aminoethyl)piperazine, reaction products with chlorosulfonated biphenylpyrrolopyrrolediones 140-80-7P, 2-Amino-5-(diethylamino)pentane 929-06-6P, 2-(2-Aminoethoxy)ethanol 3312-60-5P, N-Cyclohexyl-1,3-propanediamine 6291-84-5DP, reaction products with chlorosulfonated biphenylpyrrolopyrrolediones 7663-77-6P, 1-(3-Aminopropyl)-2-pyrrolidone 7790-94-5DP,

Chlorosulfonic acid, reaction products with  
biphenylpyrrolopyrroledione derivs. and amines  
88949-33-1DP, chlorosulfonated, reaction products  
with amines

RL: IMF (Industrial manufacture); TEM (Technical or engineered  
material use); PREP (Preparation); USES (Uses)

(dispersants; prodn. of dispersants for  
pyrrolopyrroledione-based pigments)

IT 88949-33-1, C.I. Pigment Red 264

RL: TEM (Technical or engineered material use); USES (Uses)  
(red pigment; prodn. of dispersants for  
pyrrolopyrroledione-based pigments)

L64 ANSWER 20 OF 42 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2000:694456 HCAPLUS

DOCUMENT NUMBER: 133:283047

TITLE: Pigment-dispersing agents and pigment  
composition containing them

INVENTOR(S): Kaneda, Jun; Sawamura, Katsuhiko

PATENT ASSIGNEE(S): Toyo Ink Mfg. Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 12 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

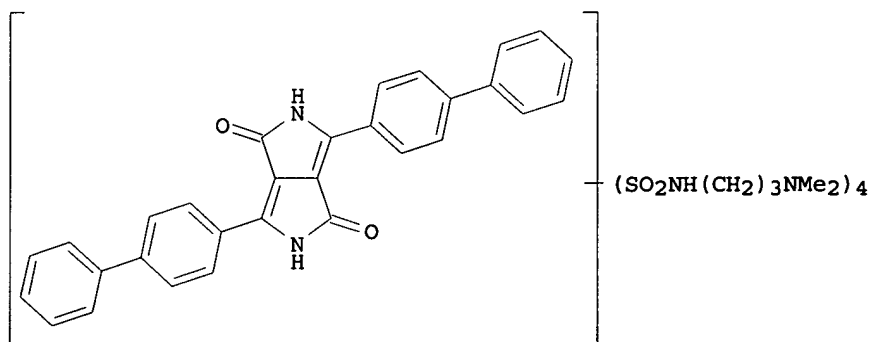
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 2000273346	A2	20001003	JP 1999-77080	199903 23
PRIORITY APPLN. INFO.:				199903 23

OTHER SOURCE(S): MARPAT 133:283047

GI



AB A pigment-dispersing agent is characterized by contg. a  
diketopyrrolopyrrole skeleton in the mol. and can be exemplified by

compd. I. A pigment compn. comprising the dispersing agent and pigments, which may be diketopyrrolopyrrole-type pigments, is useful in inks and coatings.

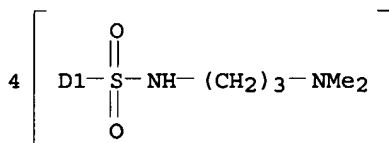
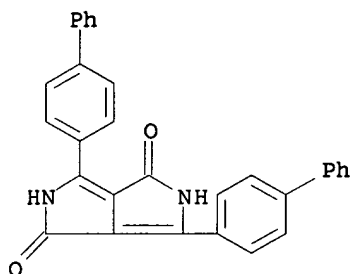
IT 300561-05-1P 300561-06-2P 300561-07-3P  
300561-08-4P 300561-09-5P 300561-10-8P  
300561-11-9P 300561-12-0P 300561-13-1P  
300561-14-2P 300561-15-3P

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(pigment-dispersing agents and pigment compn. contg. them)

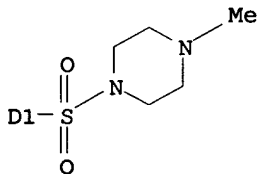
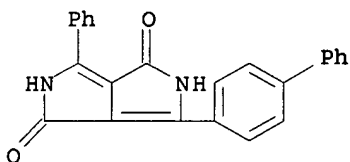
RN 300561-05-1 HCAPLUS

CN [1,1'-Biphenyl]-ar,ar'-disulfonamide, 4,4''-(2,3,5,6-tetrahydro-3,6-dioxopyrrolo[3,4-c]pyrrole-1,4-diyl)bis[N,N'-bis[3-(dimethylamino)propyl]- (9CI) (CA INDEX NAME)



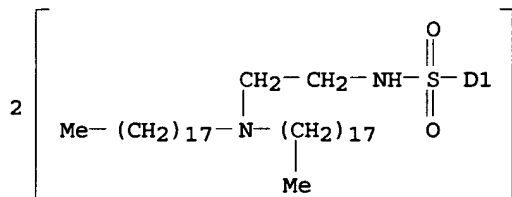
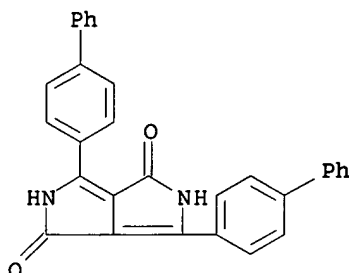
RN 300561-06-2 HCAPLUS

CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3-[1,1'-biphenyl]-4-yl-2,5-dihydro-6-phenyl-, ar-[(4-methyl-1-piperazinyl)sulfonyl] deriv. (9CI) (CA INDEX NAME)



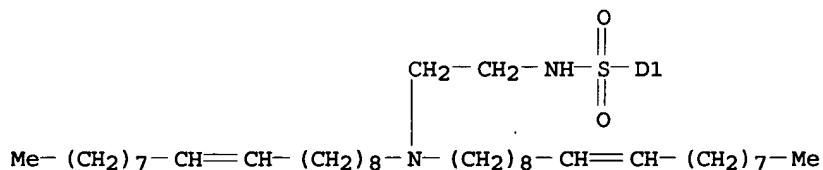
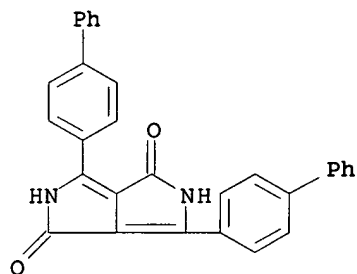
RN 300561-07-3 HCAPLUS

CN [1,1'-Biphenyl]sulfonamide, 4,4''(or 4',4''')-(2,3,5,6-tetrahydro-3,6-dioxopyrrolo[3,4-c]pyrrole-1,4-diyl)bis[N-[2-(di-octadecylamino)ethyl]- (9CI) (CA INDEX NAME)



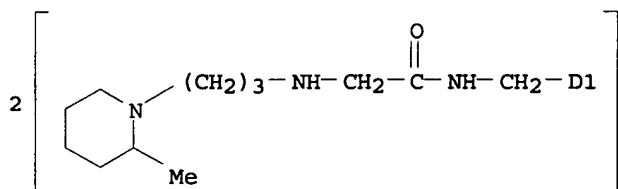
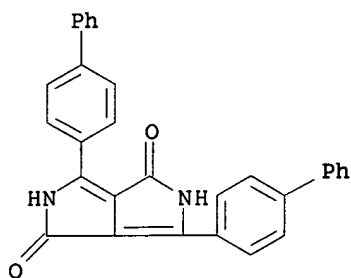
RN 300561-08-4 HCAPLUS

CN [1,1'-Biphenyl]sulfonamide, N-[2-(di-9-octadecenylamino)ethyl]-4(or 4')-(4-[1,1'-biphenyl]-4-yl-2,3,5,6-tetrahydro-3,6-dioxopyrrolo[3,4-c]pyrrol-1-yl)- (9CI) (CA INDEX NAME)



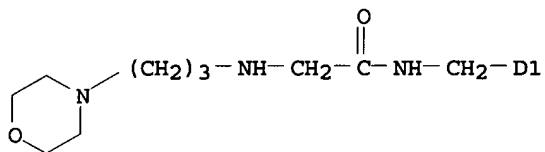
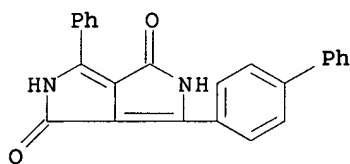
RN 300561-09-5 HCAPLUS

CN Acetamide, N,N'-[(2,3,5,6-tetrahydro-3,6-dioxopyrrolo[3,4-c]pyrrole-1,4-diyl)bis([1,1'-biphenyl]diylmethylene)]bis[2-[[3-(2-methyl-1-piperidinyl)propyl]amino]- (9CI) (CA INDEX NAME)



RN 300561-10-8 HCAPLUS

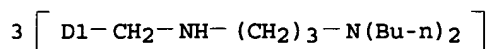
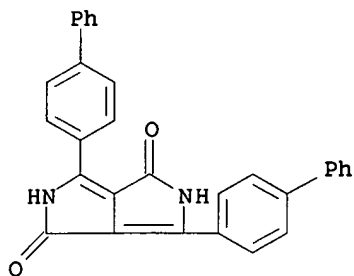
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3-[1,1'-biphenyl]-4-yl-2,5-dihydro-6-phenyl-, ar-[[[[3-(4-morpholinyl)propyl]amino]acetyl]amino]methyl] deriv. (9CI) (CA INDEX NAME)



RN 300561-11-9 HCAPLUS

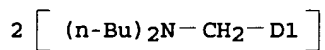
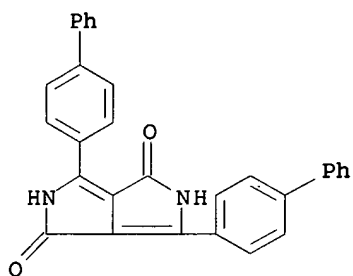
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3-[bis[[[3-(dibutylamino)propyl]amino]methyl][1,1'-biphenyl]-4-yl]-6-[[[3-(dibutylamino)propyl]amino]methyl][1,1'-biphenyl]-4-yl]-2,5-dihydro-, deriv. (9CI) (CA INDEX NAME)





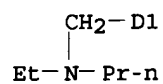
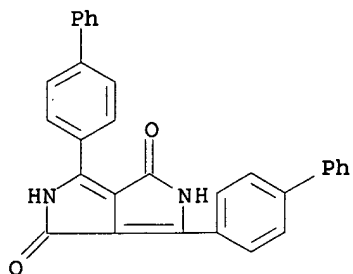
RN 300561-12-0 HCAPLUS

CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis[[(dibutylamino)methyl][1,1'-biphenyl]-4-yl]-2,5-dihydro- (9CI) (CA INDEX NAME)



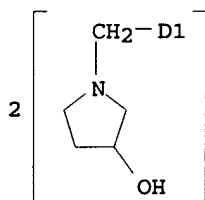
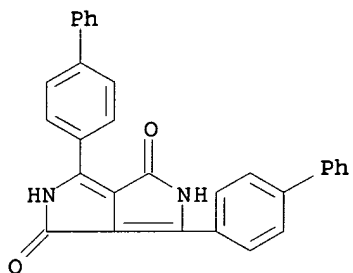
RN 300561-13-1 HCAPLUS

CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3-[1,1'-biphenyl]-4-yl-6-[[ethylpropylamino)methyl][1,1'-biphenyl]-4-yl]-2,5-dihydro- (9CI) (CA INDEX NAME)



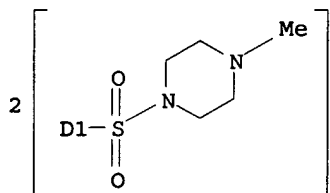
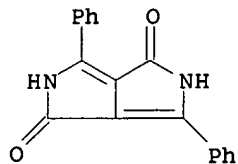
RN 300561-14-2 HCAPLUS

CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-3,6-bis[[3-hydroxy-1-pyrrolidinyl)methyl][1,1'-biphenyl]-4-yl]- (9CI) (CA INDEX NAME)

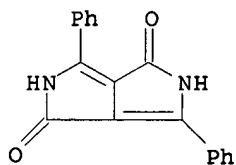


RN 300561-15-3 HCAPLUS

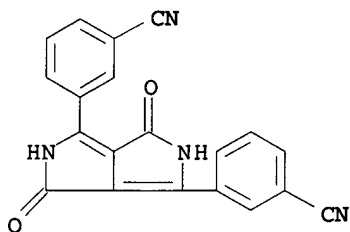
CN Piperazine, 1,1'-[(2,3,5,6-tetrahydro-3,6-dioxopyrrolo[3,4-c]pyrrole-1,4-diyl)bis(phenylenesulfonyl)]bis[4-methyl- (9CI) (CA INDEX NAME)



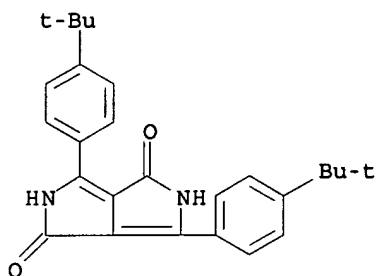
IT 54660-00-3, C.I.Pigment Red 255 84632-50-8,  
 C.I.Pigment Orange 71 84632-59-7, C.I.Pigment Orange 73  
 84632-65-5, C.I.Pigment Red 254 88949-33-1,  
 C.I.Pigment Red 264  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (pigment-dispersing agents and pigment compn. contg. them)  
 RN 54660-00-3 HCAPLUS  
 CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-3,6-diphenyl- (9CI)  
 (CA INDEX NAME)



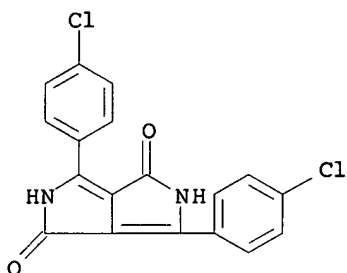
RN 84632-50-8 HCAPLUS  
 CN Benzonitrile, 3,3'-(2,3,5,6-tetrahydro-3,6-dioxopyrrolo[3,4-c]pyrrole-1,4-diyl)bis- (9CI) (CA INDEX NAME)



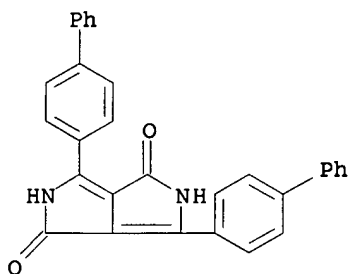
RN 84632-59-7 HCAPLUS  
 CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis[4-(1,1-dimethylethyl)phenyl]-2,5-dihydro- (9CI) (CA INDEX NAME)



RN 84632-65-5 HCAPLUS

CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis(4-chlorophenyl)-2,5-dihydro-  
(9CI) (CA INDEX NAME)

RN 88949-33-1 HCAPLUS

CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis([1,1'-biphenyl]-4-yl)-2,5-  
dihydro- (9CI) (CA INDEX NAME)RL: RCT (Reactant); RACT (Reactant or reagent)  
(prepn. of pigment-dispersing agents)

IC ICM C09B067-20

ICS C09B067-20; B01F017-00; B01F017-16; B01F017-32; C09D017-00;  
C07D487-04

CC 42-6 (Coatings, Inks, and Related Products)

IT 300561-05-1P 300561-06-2P 300561-07-3P

300561-08-4P 300561-09-5P 300561-10-8P

300561-11-9P 300561-12-0P 300561-13-1P

300561-14-2P 300561-15-3P

RL: IMF (Industrial manufacture); TEM (Technical or engineered  
material use); PREP (Preparation); USES (Uses)

(pigment-dispersing agents and pigment compn. contg. them)

IT 81-77-6, C.I.Pigment Blue 60 147-14-8, C.I.Pigment Blue 15  
 475-71-8, C.I.Pigment Yellow 24 1047-16-1, C.I.Pigment Violet 19  
 3049-71-6, C.I.Pigment Red 178 4051-63-2, C.I.Pigment Red 177  
 4216-01-7, C.I.Pigment Yellow 108 4378-61-4, C.I.Pigment Red 168  
 4424-06-0, C.I.Pigment Orange 43 5281-04-9, C.I.Pigment Red 57:1  
 6358-85-6, C.I.Pigment Yellow 12 7585-41-3, C.I.Pigment Red 48:1  
 25157-64-6, C.I.Pigment Yellow 150 36888-99-0, C.I.Pigment Yellow  
 139 54660-00-3, C.I.Pigment Red 255 76829-11-3, C.I.Acid  
 Red 272 84632-50-8, C.I.Pigment Orange 71  
 84632-59-7, C.I.Pigment Orange 73 84632-65-5,  
 C.I.Pigment Red 254 88949-33-1, C.I.Pigment Red 264  
 215247-95-3, C.I.Pigment Violet 23 251086-13-2, C.I.Pigment Red  
 270  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (pigment-dispersing agents and pigment compn. contg. them)

IT 109-55-7 111-92-2, Dibutylamine 25560-00-3 88949-33-1  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (prepn. of pigment-dispersing agents)

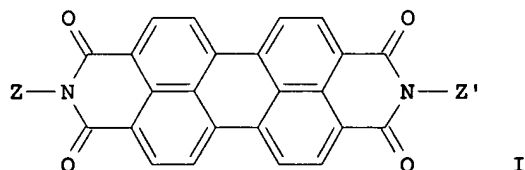
L64 ANSWER 21 OF 42 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2000:592418 HCAPLUS  
 DOCUMENT NUMBER: 133:194724  
 TITLE: Pigment preparations based on  
 diketopyrrolopyrrole pigments with basic  
 perylene dispersing agents  
 INVENTOR(S): Weber, Joachim; Dietz, Erwin  
 PATENT ASSIGNEE(S): Clariant G.m.b.H., Germany  
 SOURCE: Eur. Pat. Appl., 16 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1029899	A2	20000823	EP 2000-102381	20000204
EP 1029899	A3	20021016		
EP 1029899	B1	20050518		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
DE 19906494	A1	20000824	DE 1999-19906494	19990217
ES 2242558	T3	20051116	ES 2000-102381	20000204
KR 2000058069	A	20000925	KR 2000-7359	20000216
JP 2000290523	A2	20001017	JP 2000-37762	20000216
US 6409816	B1	20020625	US 2000-505364	20000216
PRIORITY APPLN. INFO.:				DE 1999-19906494 A 199902

17

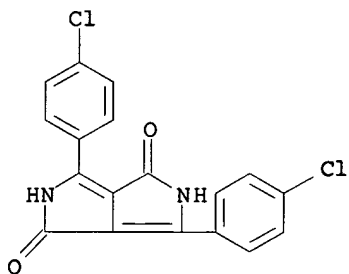
OTHER SOURCE(S): MARPAT 133:194724  
GI



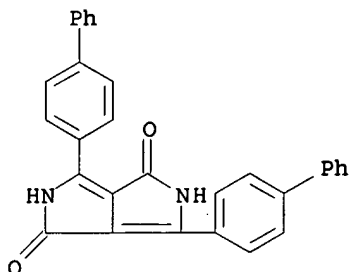
AB Pigment preps. contg. a diketopyrrolopyrrole pigment and a perylenetetracarboxylic diimide I [Z = XNR<sub>1</sub>R<sub>2</sub>; Z<sub>1</sub> = XNR<sub>1</sub>R<sub>2</sub>, H, OH, amino, (un)substituted C<sub>1</sub>-20 alkyl or Ph; R<sub>1</sub>, R<sub>2</sub> = H, (un)substituted C<sub>1</sub>-20 alkyl or C<sub>2</sub>-20 alkenyl, or NR<sub>1</sub>R<sub>2</sub> = heterocyclyl; X = C<sub>2</sub>-6 alkylene, (un)substituted C<sub>5</sub>-7 cycloalkylene] as pigment dispersing agent, optionally together with a surfactant and other conventional additives, have advantageous rheol. and coloristic properties. Thus, a mixt. of 20 parts C.I. Pigment Red 264 and 1 part I (Z = 2-piperazinoethyl, Z<sub>1</sub> = Me) incorporated in a high-solids acrylic stoving lacquer gave a metallic coating with 20° gloss (ASTM D 523) 70.

IT 84632-65-5, C.I. Pigment Red 254  
88949-33-1, C.I. Pigment Red 264  
RL: TEM (Technical or engineered material use); USES (Uses)  
(pigment preps. based on diketopyrrolopyrrole pigments with basic perylene dispersing agents)

RN 84632-65-5 HCAPLUS  
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis(4-chlorophenyl)-2,5-dihydro- (9CI) (CA INDEX NAME)



RN 88949-33-1 HCAPLUS  
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis([1,1'-biphenyl]-4-yl)-2,5-dihydro- (9CI) (CA INDEX NAME)



IC ICM C09B067-22  
 ICS C09B067-46; C08K005-34  
 CC 42-6 (Coatings, Inks, and Related Products)  
 IT 84632-65-5, C.I. Pigment Red 254  
 88949-33-1, C.I. Pigment Red 264  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (pigment preps. based on diketopyrrolopyrrole  
 pigments with basic perylene dispersing agents)

L64 ANSWER 22 OF 42 HCAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 2000:553264 HCAPLUS  
 DOCUMENT NUMBER: 133:165170  
 TITLE: Pigment particle growth and/or crystal phase  
 directors, their production and their use  
 INVENTOR(S): Babler, Fridolin  
 PATENT ASSIGNEE(S): Ciba Specialty Chemicals Holding Inc., Switz.  
 SOURCE: Eur. Pat. Appl., 18 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1026207	A2	20000809	EP 2000-810066	20000125
EP 1026207	A3	20020918		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
CA 2297506	AA	20000802	CA 2000-2297506	20000131
CN 1265404	A	20000906	CN 2000-101983	20000201
KR 2000057856	A	20000925	KR 2000-4870	20000201
JP 2000226530	A2	20000815	JP 2000-25188	20000202
US 6225472	B1	20010501	US 2000-496493	20000202
US 6264733	B1	20010724	US 2000-496494	

				200002 02
US 2001016655	A1	20010823	US 2001-801306	200103 07
US 6406533	B2	20020618		
US 2001022150	A1	20010920	US 2001-862673	200105 22
PRIORITY APPLN. INFO.:			US 1999-118405P	P 199902 02
			US 1999-118419P	P 199902 02
			US 2000-496493	A3 200002 02
			US 2000-496494	A3 200002 02

## OTHER SOURCE(S): MARPAT 133:165170

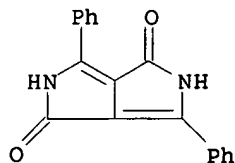
AB Compds. of the type (MO3S)mQ1[CH2X1Y1n]o (M = metal cation, quaternary N cation, H; Y1 = sulfonic or carboxylic acid or salt thereof; Q1 = pigment moiety; X1 = arom. group, cycloheteroaliph. group with at least one 5- 6-membered ring or a heteroarom. group with at least one 6-membered ring but not phthalimido; m, n = 0-2.5; o = 0.05-4) or compds. of the type (MO3S)pQ2[CH2X2Y2q]r (Q2 = optionally substituted 6,13-dihydroquinacridone moiety; M = metal cation, quaternary N cation, H; Y2 = sulfonic or carboxylic acid or salt thereof; X2 = arom. group, cycloheteroaliph. group with at least one 5- or 6-membered ring or a heteroarom. group with at least one 5- or 6-membered ring but not phthalimido; p, q = 0-2.5; r = 0-4) are obtained for use in the prodn. of org. pigments with desired crystal forms or phases. In the prepn. of such compds., a pigment (Q1 or Q2) is dissolved in concd. H2SO4, the intermediate X1 or X2 is added and dissolved at <50°, paraformaldehyde is added at <50°, and the mixt. is then heated at 50-100°. In an example, Monastral Red Y-RT 759D in H2SO4 was heated with benzenesulfonic acid and paraformaldehyde to give a product (I) of mol. wt. 482. Then 2,9-dichloro-6,13-dihydroquinacridone is oxidized to magenta gamma-form 2,9-dichloroquinacridone in the presence of I.

IT 54660-00-3DP, Irgazin DPP Scarlet EK, reaction products with paraformaldehyde and arenesulfonic acid derivs.  
 RL: IMF (Industrial manufacture); NUU (Other use, unclassified);  
 PREP (Preparation); USES (Uses)  
 (prodn. of pigment particle growth and crystal phase directors)

RN 54660-00-3 HCAPLUS

CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-3,6-diphenyl- (9CI)  
 (CA INDEX NAME)





IC ICM C09B067-48  
ICS C09B067-22

CC 41-5 (Dyes, Organic Pigments, Fluorescent Brighteners, and Photographic Sensitizers)  
Section cross-reference(s): 37, 42

IT 67-52-7DP, Barbituric acid, reaction products with paraformaldehyde and dihydroquinacridone 84-48-0DP, reaction products with paraformaldehyde and org. pigments 85-41-6DP, Phthalimide, reaction products with paraformaldehyde and dihydroquinacridone 85-47-2DP, 1-Naphthalenesulfonic acid, reaction products with paraformaldehyde and org. pigments 98-11-3DP, Benzenesulfonic acid, reaction products with paraformaldehyde and org. pigments, preparation 108-78-1DP, Melamine, reaction products with paraformaldehyde and dihydroquinacridone 120-18-3DP, 2-Naphthalenesulfonic acid, reaction products with paraformaldehyde and org. pigments 128-44-9DP, reaction products with paraformaldehyde and org. pigments 1047-16-1DP, Monastral Red Y-RT 759D, reaction products with paraformaldehyde and arenesulfonic acid derivs. 30525-89-4DP, Paraformaldehyde, reaction products with pigments and arenesulfonic acid derivs. 54660-00-3DP, Irgazin DPP Scarlet EK, reaction products with paraformaldehyde and arenesulfonic acid derivs.  
RL: IMF (Industrial manufacture); NUU (Other use, unclassified); PREP (Preparation); USES (Uses)  
(prodn. of pigment particle growth and crystal phase directors)

L64 ANSWER 23 OF 42 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1999:498354 HCAPLUS

DOCUMENT NUMBER: 131:158891

TITLE: Pigment red paste and its use in manufacture of color filters and liquid-crystal display devices

INVENTOR(S): Watanabe, Takuo; Eguchi, Yoshiichi; Shimizu, Kazuharu

PATENT ASSIGNEE(S): Toray Industries, Inc., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 12 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 11217514	A2	19990810	JP 1998-22392	19980203
PRIORITY APPLN. INFO.:			JP 1998-22392	19980203

AB The paste contains Pigment Red PR-254, polymers and solvents and can give color filters for LCD devices with good light transmission and

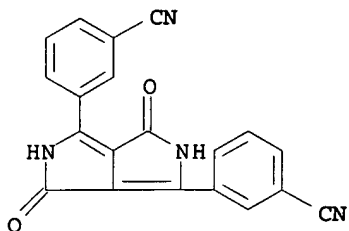
high color purity. Thus, a paste was obtained from a polyamic acid dispersion, and a color dispersion contg. Pigment Red PR-254 and Pigment Orange 38 at wt. ratio 40:60.

IT 84632-50-8 237057-14-6

RL: TEM (Technical or engineered material use); USES (Uses)  
(compn. with Pigment Red PR-254; pigment red paste and use in manuf. of color filters and liq.-crystal display devices)

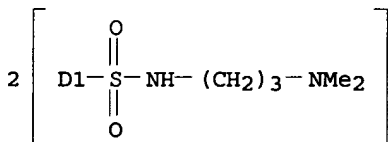
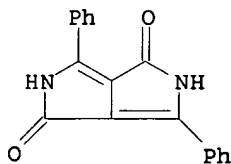
RN 84632-50-8 HCAPLUS

CN Benzonitrile, 3,3'-(2,3,5,6-tetrahydro-3,6-dioxopyrrolo[3,4-c]pyrrole-1,4-diyl)bis- (9CI) (CA INDEX NAME)



RN 237057-14-6 HCAPLUS

CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-3,6-diphenyl-, bis[[[3-(dimethylamino)propyl]amino]sulfonyl] deriv. (9CI) (CA INDEX NAME)

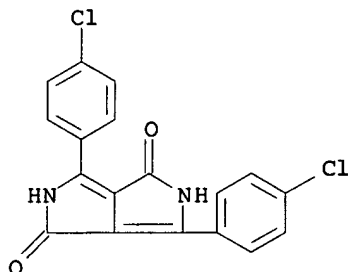


IT 84632-65-5, Pigment Red 254

RL: TEM (Technical or engineered material use); USES (Uses)  
(pigment; pigment red paste and use in manuf. of color filters and liq.-crystal display devices)

RN 84632-65-5 HCAPLUS

CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis(4-chlorophenyl)-2,5-dihydro- (9CI) (CA INDEX NAME)



IC ICM C09B067-20  
ICS G02B005-20  
CC 42-6 (Coatings, Inks, and Related Products)  
Section cross-reference(s): 41, 76  
IT 523-44-4, Naphthol Orange 12236-64-5, C.I. Pigment Orange 38  
56686-86-3 84632-50-8 237057-14-6  
RL: TEM (Technical or engineered material use); USES (Uses)  
(compn. with Pigment Red PR-254; pigment red paste and use in  
manuf. of color filters and liq.-crystal display devices)  
IT 84632-65-5, Pigment Red 254  
RL: TEM (Technical or engineered material use); USES (Uses)  
(pigment; pigment red paste and use in manuf. of color filters  
and liq.-crystal display devices)

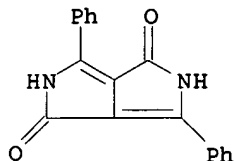
L64 ANSWER 24 OF 42 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1998:585651 HCAPLUS  
DOCUMENT NUMBER: 129:277414  
TITLE: Pigment dispersants containing N-alkylated  
pigment derivatives, pigment compositions  
containing the same, and manufacture of  
N-alkylated pigment derivatives  
INVENTOR(S): Ohashi, Yuji; Ishimori, Motokazu  
PATENT ASSIGNEE(S): Dainippon Ink and Chemicals, Inc., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 10237344	A2	19980908	JP 1997-45604	19970228
PRIORITY APPLN. INFO.:				19970228

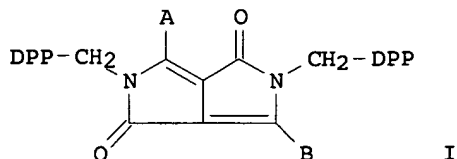
AB The title dispersants contain N-alkylated condensed polynuclear pigment derivs. obtained by alkyl substitution of the H atom bonded to the imino nitrogen atom in an imino group-contg. heterocyclic ring condensed in a polynuclear form.  $\gamma$ -Quinacridone (Fastogen Red 7094Y) in DMF was butylated with BuBr in the presence of K tert-butoxide. An acrylic melamine compn. contg. Fastogen Red 7094Y dispersed by the above butylation product gave a coating with superior luster to that using no dispersant.

IT 54660-00-3, 1,4-Diketo-3,6-diphenylpyrrolo[3,4-c]  
 pyrrole  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (pigment dispersants contg. N-alkylated  
 pigment derivs., pigment compns. contg. the  
 same, and manuf. of N-alkylated pigment derivs.)  
 RN 54660-00-3 HCAPLUS  
 CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-3,6-diphenyl- (9CI)  
 (CA INDEX NAME)



IC ICM C09B067-20  
 CC 42-6 (Coatings, Inks, and Related Products)  
 IT 54660-00-3, 1,4-Diketo-3,6-diphenylpyrrolo[3,4-c]  
 pyrrole  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (pigment dispersants contg. N-alkylated  
 pigment derivs., pigment compns. contg. the  
 same, and manuf. of N-alkylated pigment derivs.)  
 L64 ANSWER 25 OF 42 HCAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 1998:508933 HCAPLUS  
 DOCUMENT NUMBER: 129:162886  
 TITLE: Viscosity reducing 1,4-diketo-3,6-  
 diarylpyrrolo[3,4-c]pyrrole derivatives  
 INVENTOR(S): Hendi, Shivakumar B.  
 PATENT ASSIGNEE(S): Ciba Specialty Chemicals Corporation, USA  
 SOURCE: U.S., 8 pp.  
 CODEN: USXXAM  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5786487	A	19980728	US 1997-938658	199709 26
PRIORITY APPLN. INFO.:			US 1997-938658	199709 26
OTHER SOURCE(S):		MARPAT 129:162886		
GI				



AB The title pyrrolopyrrole (DPP) derivs. are I (A, B = aryl), substituted by 0-6 mol SO<sub>3</sub>M/mol I; where M = H or a metal or ammonium cation, and show excellent rheol. enhancing properties for pigment dispersions, esp. those contg. quinacridones, DPPs and their solid soln. pigments. Thus, 1,4-diketo-3,6-diphenylpyrrolo[3,4-c]pyrrole (II) and paraformaldehyde in concd. (96%) H<sub>2</sub>SO<sub>4</sub> at .apprx.45° gave an intermediate which reacts with 2 mol II to give a product sulfate, suitable for pigments for coatings.

IT 54660-00-3, 1,4-Diketo-3,6-diphenylpyrrolo[3,4-c]

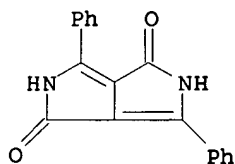
pyrrole

RL: RCT (Reactant); RACT (Reactant or reagent)

(diaryldiketopyrrolopyrrole deriv. viscosity reducing agents for pigment dispersions for paints)

RN 54660-00-3 HCAPLUS

CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-3,6-diphenyl- (9CI)  
(CA INDEX NAME)



IC ICM C07D487-04

INCL 548453000

CC 42-6 (Coatings, Inks, and Related Products)

Section cross-reference(s): 28

IT 30525-89-4, Paraformaldehyde 54660-00-3,  
1,4-Diketo-3,6-diphenylpyrrolo[3,4-c]pyrrole

RL: RCT (Reactant); RACT (Reactant or reagent)

(diaryldiketopyrrolopyrrole deriv. viscosity reducing agents for pigment dispersions for paints)

REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR  
THIS RECORD. ALL CITATIONS AVAILABLE IN  
THE RE FORMAT

L64 ANSWER 26 OF 42 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1998:504795 HCAPLUS

DOCUMENT NUMBER: 129:162885

TITLE: Viscosity reducing 1,4-diketo-3,6-diphenylpyrrolo[3,4-c]pyrrole derivatives

INVENTOR(S): Hendi, Shivakumar B.

PATENT ASSIGNEE(S): Ciba Specialty Chemicals Corporation, USA

SOURCE: U.S., 8 pp.

CODEN: USXXAM

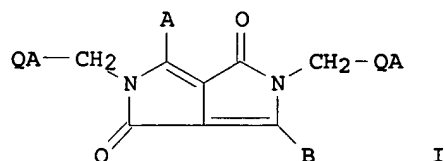
DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	---	-----	-----	
US 5785750	A	19980728	US 1997-938656	199709 26
PRIORITY APPLN. INFO.:			US 1997-938656	199709 26
OTHER SOURCE(S):			MARPAT 129:162885	
GI				

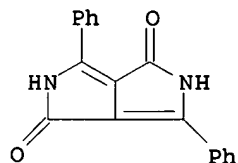


AB The title pyrrolopyrrole (DPP) derivs. are I (QA = quinacridone radical, A, B = aryl), substituted by 0-6 mol SO<sub>3</sub>M/mol I; where M = H or a metal or ammonium cation, and show excellent rheol. enhancing properties for pigment dispersions, esp. those contg. quinacridones, DPPs and their solid soln. pigments. Thus, 1,4-diketo-3,6-diphenylpyrrolo[3,4-c]pyrrole, quinacridone, and paraformaldehyde in concd. (96%) H<sub>2</sub>SO<sub>4</sub> at .apprx.45° gave I (A, B = Ph) sulfate, suitable for pigments for coatings.

IT **54660-00-3, 1,4-Diketo-3,6-diphenylpyrrolo[3,4-c]pyrrole 84632-59-7 84632-66-6**  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (diketodiarylpyrrolopyrrole quinacridone deriv.  
 viscosity reducing agents for pigment  
 dispersions for paints)

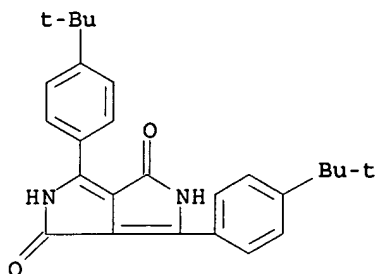
RN 54660-00-3 HCAPLUS

CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-3,6-diphenyl- (9CI)  
 (CA INDEX NAME)

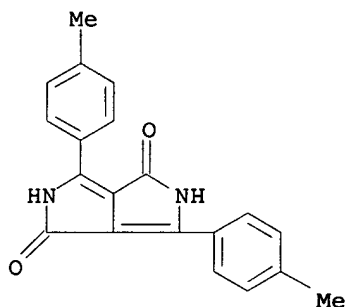


RN 84632-59-7 HCAPLUS

CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis[4-(1,1-dimethylethyl)phenyl]-2,5-dihydro- (9CI) (CA INDEX NAME)



RN 84632-66-6 HCAPLUS

CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-3,6-bis(4-methylphenyl)-  
(9CI) (CA INDEX NAME)

IC ICM C07D471-04

ICS C09B048-00

INCL 106497000

CC 42-6 (Coatings, Inks, and Related Products)

Section cross-reference(s): 28

IT 1047-16-1, Quinacridone 3089-16-5, 4,11-Dichloroquinacridone  
3089-17-6, 2,9-Dichloroquinacridone 30525-89-4, Paraformaldehyde  
54660-00-3, 1,4-Diketo-3,6-diphenylpyrrolo[3,4-c]  
pyrrole 84632-59-7 84632-66-6

RL: RCT (Reactant); RACT (Reactant or reagent)

(diketodiarylpyrrolopyrrole quinacridone deriv.

viscosity reducing agents for pigment

dispersions for paints)

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR  
THIS RECORD. ALL CITATIONS AVAILABLE IN  
THE RE FORMAT

L64 ANSWER 27 OF 42 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1998:229014 HCAPLUS

DOCUMENT NUMBER: 128:231665

TITLE: Surface-sulfonated organic pigments and their  
manufactureINVENTOR(S): Uemura, Toshiyuki; Iguchi, Tsukasa; Satake,  
Sunao; Uraki, Hisashi; Iida, Yasuharu

PATENT ASSIGNEE(S): Toyo Ink Manufacturing Co., Ltd., Japan

SOURCE: Eur. Pat. Appl., 20 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

## PATENT INFORMATION:

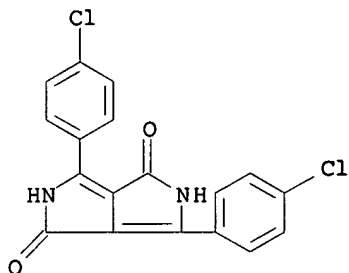
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 834537	A1	19980408	EP 1997-307934	19971007
EP 834537	B1	20011212		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
JP 10110111	A2	19980428	JP 1996-265717	19961007
JP 3271529	B2	20020402		
JP 10110110	A2	19980428	JP 1996-265718	19961007
JP 3271530	B2	20020402		
JP 10110129	A2	19980428	JP 1996-265719	19961007
JP 3141792	B2	20010305		
JP 10110114	A2	19980428	JP 1996-268618	19961009
US 5928419	A	19990727	US 1997-944437	19971006
EP 894835	A2	19990203	EP 1998-119588	19971007
EP 894835	A3	19990224		
EP 894835	B1	20020306		
R: DE, FR, GB				
PRIORITY APPLN. INFO.:			JP 1996-265717	A 19961007
			JP 1996-265718	A 19961007
			JP 1996-265719	A 19961007
			JP 1996-268618	A 19961009
			EP 1997-307934	A3 19971007

AB An org. pigment in particulate form, wherein the interior of each pigment particle is substantially free of sulfonic acid groups and the surface of each pigment particle carries a sulfonic acid group, is prepd. by (1) dispersing the org. pigment in a solvent in which the pigment is insol. or sparingly sol. and (2) reacting thus obtained dispersion with a sulfonating agent. The pigment is useful



in ink-jet recording liqs.

IT **84632-65-5DP**, Irgazin DPP Red BO, **sulfonated**  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (surface-**sulfonated** org. pigments and their manuf.)  
 RN 84632-65-5 HCAPLUS  
 CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis(4-chlorophenyl)-2,5-dihydro-(9CI) (CA INDEX NAME)



IC ICM C09B067-08  
 ICS C09B067-22; C09B047-24; C09D011-00  
 CC **42-6** (Coatings, Inks, and Related Products)  
 IT 147-14-8DP, Lionol Blue FG 7351, sulfonated 77804-81-0DP, Novoperm Yellow P-HG, sulfonated **84632-65-5DP**, Irgazin DPP Red BO, **sulfonated** 185070-13-7DP, Lionogen Red Y-F, sulfonated  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (surface-**sulfonated** org. pigments and their manuf.)  
 REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L64 ANSWER 28 OF 42 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1997:467558 HCAPLUS

DOCUMENT NUMBER: 127:110356

TITLE: Pigment dispersants providing pigment dispersions with high brightness and coloring power and excellent flowability and storability  
 INVENTOR(S): Kato, Yoshinori; Takahashi, Shinjiro; Nakayama, Koji

PATENT ASSIGNEE(S): Nippon Kayaku Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 31 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 09137075	A2	19970527	JP 1995-318502	19951114
PRIORITY APPLN. INFO.:				JP 1995-318502
				19951114

OTHER SOURCE(S): MARPAT 127:110356

AB The title dispersants contain, as effective components, dyes having amine component residue  $-\text{NH}(\text{CH}_2)_j\text{Q}(\text{R}_2\text{k})(\text{R}_3\text{m})$  [Q = cyclohexane ring;  $\text{R}_2 = (\text{CH}_2)_n\text{D}(\text{CH}_2)_p\text{NR}_4\text{R}_5$ ;  $\text{R}_4, \text{R}_5 = \text{H}$ , (un)substituted  $\text{C}_{\leq 10}$  alkyl or  $\text{R}_4\text{R}_5 =$  heterocycle member or  $\text{R}_4$  or  $\text{R}_5$  may form a ring with neighboring methylene group;  $\text{D} = \text{CH}_2, \text{NR}_6, \text{O}$ ;  $\text{R}_6 = \text{H}$ , (un)substituted  $\text{C}_{\leq 10}$  alkyl, aryl;  $n, p = 0-5$ ;  $\text{R}_3 = \text{H}$ , alkyl, alkoxy, halogen;  $j = 0-2$ ;  $k = 1-2$ ;  $m = 0-3$ ]. Chlorosulfonated CuPc (Pc = phthalocyanine) suspended in water was treated with 1-amino-4-(dimethylamino)cyclohexane (ZNH<sub>2</sub>) in the presence of NaOH to pH 10 at 60° for 2 h to obtain CuPc(SO<sub>3</sub>H)(SO<sub>2</sub>NH<sub>2</sub>)<sub>3</sub> which was used as dispersant for C.I. Pigment Blue 15.

IT 192082-28-3P 192082-29-4P 192082-30-7P

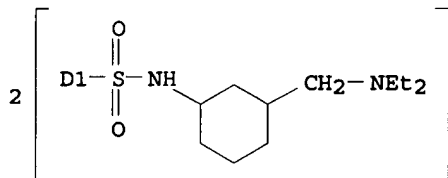
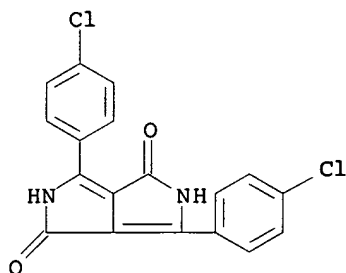
192082-31-8P

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(pigment dispersants providing pigment dispersions with high brightness and coloring power and excellent flowability and storability)

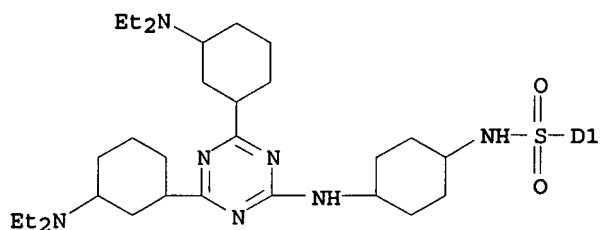
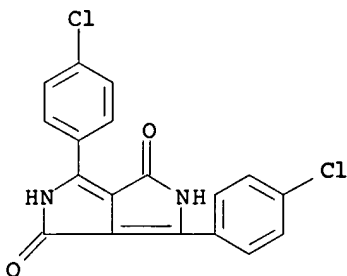
RN 192082-28-3 HCAPLUS

CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis(4-chlorophenyl)-2,5-dihydro-, bis[[[3-[(diethylamino)methyl]cyclohexyl]amino]sulfonyl] deriv. (9CI) (CA INDEX NAME)



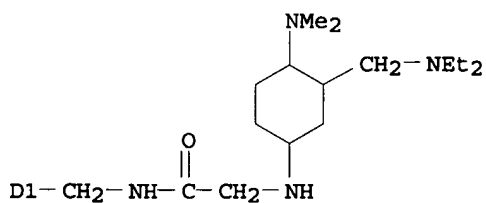
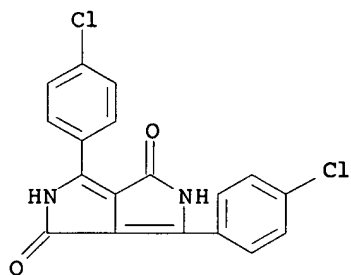
RN 192082-29-4 HCAPLUS

CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis(4-chlorophenyl)-2,5-dihydro-, bis[[[4-[[4,6-bis[3-(diethylamino)cyclohexyl]-1,3,5-triazin-2-yl]amino]cyclohexyl]amino]sulfonyl] deriv. (9CI) (CA INDEX NAME)



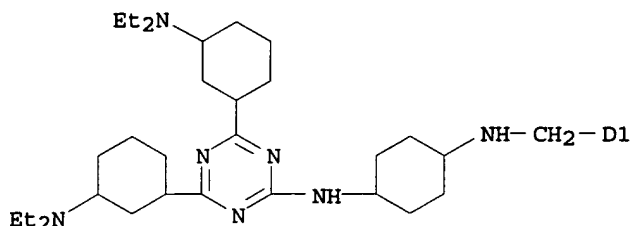
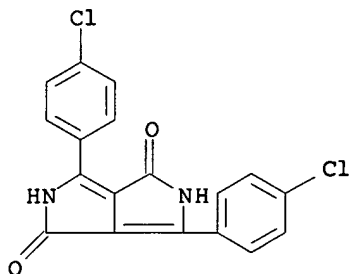
RN 192082-30-7 HCAPLUS

CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis(4-chlorophenyl)-2,5-dihydro-, mono[[[3-[(diethylamino)methyl]-4-(dimethylamino)cyclohexyl]amino]acetyl]amino]methyl] deriv. (9CI) (CA INDEX NAME)



RN 192082-31-8 HCAPLUS

CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis(4-chlorophenyl)-2,5-dihydro-, mono[[[4-[[4,6-bis[3-(diethylamino)cyclohexyl]-1,3,5-triazin-2-yl]amino]cyclohexyl]amino]methyl] deriv. (9CI) (CA INDEX NAME)

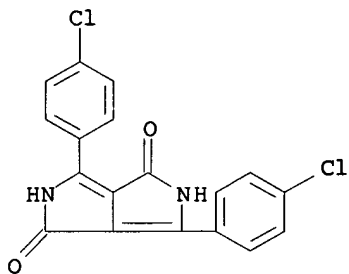


IT 84632-65-5, C.I. Pigment Red 254

RL: TEM (Technical or engineered material use); USES (Uses)  
(pigment dispersants providing pigment dispersions with high  
brightness and coloring power and excellent flowability and  
storability)

RN 84632-65-5 HCAPLUS

CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis(4-chlorophenyl)-2,5-dihydro-  
(9CI) (CA INDEX NAME)



IC ICM C09B067-20

CC 42-6 (Coatings, Inks, and Related Products)

IT 147-14-8DP, Copper phthalocyanine, sulfo aminotriazinyl derivs.

87564-36-1P	191997-06-5P	191997-16-7P	191997-18-9P
191997-20-3P	191997-21-4P	192082-09-0P	192082-10-3P
192082-11-4P	192082-12-5P	192082-13-6P	192082-14-7P
192082-15-8P	192082-16-9P	192082-17-0P	192082-18-1P
192082-19-2P	192082-20-5P	192082-21-6P	192082-22-7P
192082-23-8P	192082-24-9P	192082-25-0P	192082-26-1P
192082-27-2P	192082-28-3P	192082-29-4P	
192082-30-7P	192082-31-8P	192082-32-9P	
192082-33-0P	192082-34-1P	192082-35-2P	192082-36-3P
192082-37-4P	192082-38-5P	192082-39-6P	192082-59-0P
192082-60-3P	192082-61-4P	192082-62-5P	192082-63-6P

192082-64-7P 192082-65-8P 192142-80-6P 192142-81-7P  
 192142-82-8P 192142-83-9P 192142-84-0P 192142-85-1P  
 192142-86-2P 192142-87-3P 192142-88-4P 192142-89-5P  
 192142-90-8P 192142-93-1P 192142-94-2P 192231-05-3P

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(pigment dispersants providing pigment dispersions with high brightness and coloring power and excellent flowability and storability)

IT 81-77-6, C.I. Pigment Blue 60 147-14-8, C.I. Pigment Blue 15  
 475-71-8, C.I. Pigment Yellow 24 980-26-7, C.I. Pigment Red 122  
 3049-71-6, C.I. Pigment Red 178 4216-01-7, C.I. Pigment Yellow 108  
 4378-61-4, C.I. Pigment Red 168 4948-15-6, C.I. Pigment Red 149  
 5521-31-3, C.I. Pigment Red 179 14302-13-7, C.I. Pigment Green 36  
 24108-89-2, C.I. Pigment Red 123 61512-61-6, C.I. Pigment Orange  
 51 71819-74-4, C.I. Pigment Orange 48 **84632-65-5**, C.I.  
 Pigment Red 254 215247-95-3, C.I. Pigment Violet 23

RL: TEM (Technical or engineered material use); USES (Uses)

(pigment dispersants providing pigment dispersions with high brightness and coloring power and excellent flowability and storability)

L64 ANSWER 29 OF 42 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1997:34151 HCAPLUS  
 DOCUMENT NUMBER: 126:61525  
 TITLE: Manufacture of surface-sulfonated pigments  
 INVENTOR(S): Kamimura, Toshifumi  
 PATENT ASSIGNEE(S): Toyo Ink Mfg Co, Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 08283596	A2	19961029	JP 1995-89119	19950414
JP 2993392	B2	19991220		
PRIORITY APPLN. INFO.:			JP 1995-89119	19950414

AB The title pigments, with improved initial and stable dispersibility, are manufd. by sulfonation of pigments dispersed in active proton-free and sulfonic acid-nonreactive solvents which do not dissolve or hardly dissolve the pigments. Thus, a dispersion of 2 parts Lionol Blue FG 7351 (phthalocyanine) in 120 parts pyrrolidone reacted with 3 parts SO<sub>3</sub> at 80° for 6 h to give modified pigment, 10 parts of which was blended with 5 parts Cymel 350 (H<sub>2</sub>O-sol. amino resin) and 55 parts H<sub>2</sub>O to give a coating showing no pptn. after 1 mo at 50°.

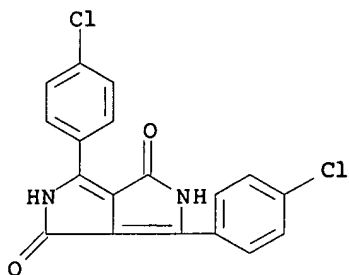
IT **84632-65-5D**, Irgazin DPP Red BO, **sulfonated**

RL: PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
 (pigments; manuf. of surface-sulfonated pigments with improved and stable dispersibility)

RN 84632-65-5 HCAPLUS

CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis(4-chlorophenyl)-2,5-dihydro-

(9CI) (CA INDEX NAME)



IC ICM C09B067-14  
 ICS C09B067-08; C09B067-16; C09B067-20  
 CC 41-8 (Dyes, Organic Pigments, Fluorescent Brighteners, and  
 Photographic Sensitizers)  
 IT 147-14-8D, sulfonated 39283-39-1D, Quinacridone red, sulfonated  
 84632-65-5D, Irgazin DPP Red B0, sulfonated  
 185070-13-7D, Lionogen Red Y-F, sulfonated  
 RL: PEP (Physical, engineering or chemical process); TEM (Technical  
 or engineered material use); PROC (Process); USES (Uses)  
 (pigments; manuf. of surface-sulfonated pigments with  
 improved and stable dispersibility)

L64 ANSWER 30 OF 42 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1996:50627 HCAPLUS  
 DOCUMENT NUMBER: 124:179023  
 TITLE: Water-based pigment dispersions  
 INVENTOR(S): Endo, Atsushi; Mochizuki, Akimitsu; Hikosaka,  
 Michichika; Fujigamori, Tsutomu  
 PATENT ASSIGNEE(S): Toyo Ink Manufacturing Co., Ltd., Japan  
 SOURCE: U.S., 6 pp. Cont.-in-part of U.S. Ser. No. 201,  
 027, abandoned.  
 CODEN: USXXAM  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5476544 A		19951219	US 1995-369515	19950106

PRIORITY APPLN. INFO.: JP 1993-38445  
 19930226  
 US 1994-201027  
 19940224

OTHER SOURCE(S): MARPAT 124:179023

AB Title dispersions, useful to improve coating gloss, tinting  
 strength, fluidity and storage stability, comprise 100 parts  
 pigments, 5-500 parts water-based resins prepd. from  
 $\alpha,\beta$ -unsatd. carboxylic acids 5-20,  $\alpha,\beta$ -unsatd.  
 N-contg. monomers 5-50, and other  $\alpha,\beta$ -unsatd. monomers  
 30-90%, and 0.1-30 parts dispersing agents Q[XYZN(R1)R2]<sub>n</sub> (Q = org.  
 dye or heterocyclic ring residue; X = divalent binding group  
 consisting of 2 to 15 atoms selected from S, C, N, O and H atoms; Y  
 = direct bond or amine derivs.; Z= C1-6 alkylene group; R1, R2 =

C1-18 alkyl or N-, O- or S-contg. heterocyclic group residue; n = 1-3). A dispersion comprising C.I. pigment blue 15:1 9.9, 20% acrylic acid-dimethylaminoethyl methacrylate-Et acrylate-Me acrylate-vinyl acetate copolymer soln. 12.5, and (Me2N)C2H4NHSO2-substituted C.I. pigment blue 15 dispersant (I) 0.1 part was mixed in an acrylic coating to form a film with 20% gloss 62%, vs. 48%, without the I.

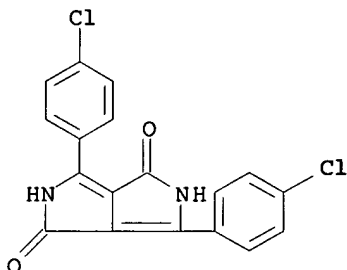
IT 84632-65-5DP, C.I. Pigment red 254, alkylaminoalkylsulfonamido derivs.

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(pigment deriv. dispersant-contg. pigmented acrylic dispersions for coatings or inks)

RN 84632-65-5 HCAPLUS

CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis(4-chlorophenyl)-2,5-dihydro-(9CI) (CA INDEX NAME)



IC ICM C09D004-02

INCL 106499000

CC 42-7 (Coatings, Inks, and Related Products)

IT 81-77-6DP, C.I. Pigment blue 60, alkylaminoalkylsulfonamido derivs. 84-65-1DP, Anthraquinone, alkylaminoalkylamido derivs. 86-74-8DP, Carbazole, alkylaminoalkylsulfonamido derivs. 475-71-8DP, C.I. Pigment yellow 24, alkylaminoalkylsulfonamido derivs. 578-95-0DP, Acridone, alkylaminoalkylsulfonamido derivs. 1047-16-1DP, C.I. Pigment violet 19, alkylaminoalkyl or alkylaminoalkylsulfonamido derivs. 3049-71-6DP, C.I. Pigment red 178, alkylaminoalkylsulfonamido derivs. 4216-01-7DP, C.I. Pigment yellow 108, alkylaminoalkylsulfonamido derivs. 4378-61-4DP, C.I. Pigment red 168, alkylaminoalkylsulfonamido derivs. 4424-06-0DP, C.I. Pigment orange 43, alkylaminoalkyl derivs. 5567-15-7DP, C.I. Pigment yellow 83, alkylaminoalkylsulfonamido derivs. 6041-94-7DP, C.I. Pigment red 2, alkylaminoalkylamido derivs. 14295-43-3DP, C.I. Pigment red 88, alkylaminoalkylsulfonamido derivs.

84632-65-5DP, C.I. Pigment red 254,

alkylaminoalkylsulfonamido derivs. 215247-95-3DP, C.I.

Pigment violet 23, alkylaminoalkylsulfonamido derivs.

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(pigment deriv. dispersant-contg. pigmented acrylic dispersions for coatings or inks)

L64 ANSWER 31 OF 42 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1995:833091 HCAPLUS

DOCUMENT NUMBER: 123:231425

TITLE: Pigment compositions based on diketopyrrolopyrrole and aminoalkyl acrylic resin.

INVENTOR(S): Bugnon, Philippe  
 PATENT ASSIGNEE(S): Ciba-Geigy A.-G., Switz.  
 SOURCE: Eur. Pat. Appl., 11 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 656402	A2	19950607	EP 1994-810662	19941123
EP 656402	A3	19960110		
EP 656402	B1	20001220		
R: CH, DE, FR, GB, IT, LI				
CA 2136914	AA	19950602	CA 1994-2136914	19941129
US 5685901	A	19971111	US 1994-346120	19941129
JP 07196884	A2	19950801	JP 1994-298183	19941201
PRIORITY APPLN. INFO.:		CH 1993-3575	A	19931201

OTHER SOURCE(S): MARPAT 123:231425

AB The compns. contain a 3,6-disubstituted 1,4-diketopyrrolo[3,4-c]pyrrole (substituents are arom. and/or pyridyl) pigment along with a partially hydrolyzed pentanedionato- or acetoacetate-type chelate of Zr, Ti, or Sn 0.1-10, sulfonated diphenyldiketopyrrolopyrrole 0.1-10, or diphenyldiketopyrrolopyrrole with a heterocyclic alkoxy group 0.1-10% as adsorbates plus 0.1-20% aminoalkyl (meth)acrylate polymer. The compns. have good coloristic and processing properties and are suitable for coatings and printing inks. Thus, poly(dimethylaminoethyl methacrylate) was prepd. and combined with a compn. of 3,6-bis(4-tert-butylphenyl)-1,4-diketopyrrolo[3,4-c]pyrrole and Zr(IV) acetylacetonate in water and dried to provide a product useful in baking coatings.

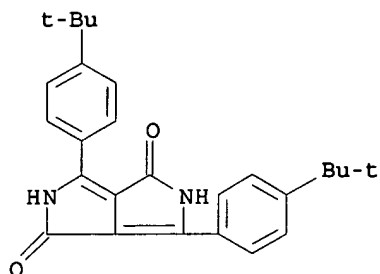
IT 84632-59-7 84632-66-6 110893-42-0,  
 2,5-Dihydro-3,6-bis(4-sulfohenyl)pyrrolo[3,4-c]pyrrole-1,4-dione  
 disodium salt

RL: TEM (Technical or engineered material use); USES (Uses)  
 (pigment compns. based on diketopyrrolopyrrole and aminoalkyl  
 acrylic resin)

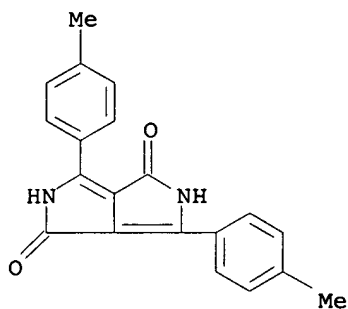
RN 84632-59-7 HCAPLUS

CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis[4-(1,1-dimethylethyl)phenyl]-2,5-dihydro- (9CI) (CA INDEX NAME)



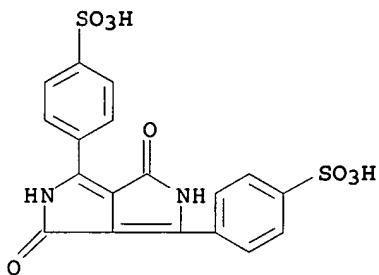


RN 84632-66-6 HCAPLUS

CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-3,6-bis(4-methylphenyl)-  
(9CI) (CA INDEX NAME)

RN 110893-42-0 HCAPLUS

CN Benzenesulfonic acid, 4,4'-(2,3,5,6-tetrahydro-3,6-dioxopyrrolo[3,4-c]pyrrole-1,4-diyl)bis-, disodium salt (9CI) (CA INDEX NAME)



●2 Na

IC ICM C09B067-20

ICA C09B057-00; C09B067-08

CC 42-6 (Coatings, Inks, and Related Products)

IT 84632-59-7 84632-66-6 110893-42-0,  
2,5-Dihydro-3,6-bis(4-sulfophenyl)pyrrolo[3,4-c]pyrrole-1,4-dione  
disodium salt

RL: TEM (Technical or engineered material use); USES (Uses)

(pigment compns. based on diketopyrrolopyrrole and aminoalkyl acrylic resin)

L64 ANSWER 32 OF 42 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1995:336477 HCAPLUS

DOCUMENT NUMBER: 122:108665

TITLE: Mixed crystals of sulfonated diketopyrrolopyrroles and polymers pigmented therewith.

INVENTOR(S): Hari, Stefan; Wallquist, Olof; Herren, Fritz; Eichenberger, Thomas

PATENT ASSIGNEE(S): Ciba-Geigy A.-G., Switz.

SOURCE: Eur. Pat. Appl., 15 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

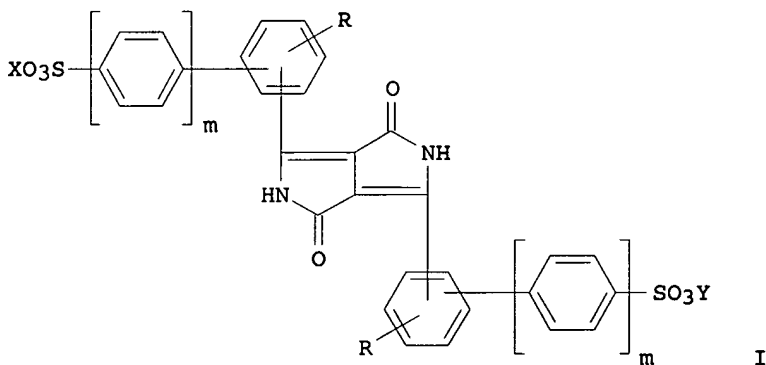
LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO. -----	KIND ---	DATE -----	APPLICATION NO. -----	DATE -----
EP 603132	A1	19940622	EP 1993-810863	19931209
EP 603132 R: CH, DE, FR, GB, LI	B1	19990512		
US 5380870	A	19950110	US 1993-166750	19931214
CA 2111606	AA	19940619	CA 1993-2111606	19931216
JP 06279700	A2	19941004	JP 1993-317690	19931217
PRIORITY APPLN. INFO.:			CH 1992-3894	A 19921218

OTHER SOURCE(S): MARPAT 122:108665  
GI



AB The diketopyrrolopyrroles (I; R = H, C1-4-alkyl or -alkoxy; X and Y

are different and comprise a metal cation and an org. ammonium cation in any ratio; m = 0, 1) are obtained in the form of mixed crystals for pigmentation of polymers such as polyolefins and ABS polymer. Thus, I (R = H, m = 1; X = Y = Na) was heated with stearylamine to give a red product contg. Na and stearylammmonium cations in 1:1 ratio.

IT 160712-89-0P 160712-90-3P 160712-91-4P  
160712-92-5P 160712-93-6P 160712-94-7P

RL: IMF (Industrial manufacture); PREP (Preparation)

(mixed crystals of **sulfonated** diketopyrrolopyrroles)

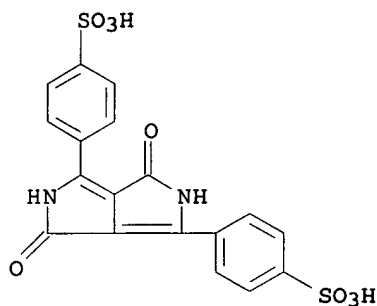
RN 160712-89-0 HCAPLUS

CN Benzenesulfonic acid, 4,4'-(2,3,5,6-tetrahydro-3,6-dioxopyrrolo[3,4-c]pyrrole-1,4-diyl)bis-, monosodium salt, compd. with 1-octadecanamine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 110893-39-5

CMF C18 H12 N2 O8 S2



CM 2

CRN 124-30-1

CMF C18 H39 N

H<sub>2</sub>N-(CH<sub>2</sub>)<sub>17</sub>-Me

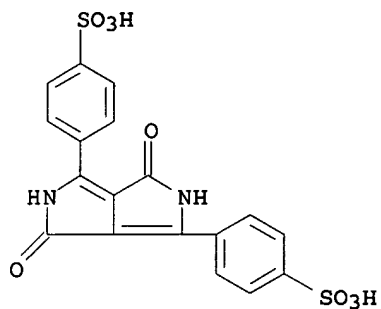
RN 160712-90-3 HCAPLUS

CN Benzenesulfonic acid, 4,4'-(2,3,5,6-tetrahydro-3,6-dioxopyrrolo[3,4-c]pyrrole-1,4-diyl)bis-, monosodium salt, compd. with cyclohexanamine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 110893-39-5

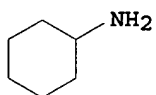
CMF C18 H12 N2 O8 S2



CM 2

CRN 108-91-8

CMF C6 H13 N



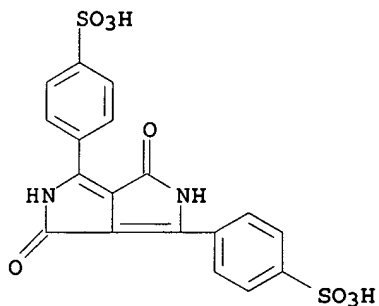
RN 160712-91-4 HCAPLUS

CN Benzenesulfonic acid, 4,4'-(2,3,5,6-tetrahydro-3,6-dioxopyrrolo[3,4-c]pyrrole-1,4-diyl)bis-, strontium salt, compd. with 1-octanamine (2:1:2) (9CI) (CA INDEX NAME)

CM 1

CRN 110893-39-5

CMF C18 H12 N2 O8 S2



CM 2

CRN 111-86-4

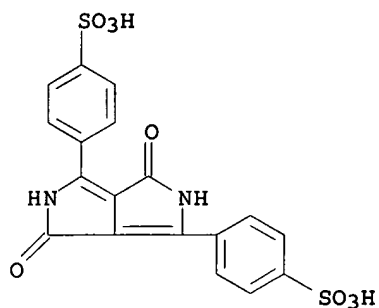
CMF C8 H19 N

H<sub>2</sub>N-(CH<sub>2</sub>)<sub>7</sub>-Me

RN 160712-92-5 HCAPLUS  
CN Benzenesulfonic acid, 4,4'-(2,3,5,6-tetrahydro-3,6-dioxopyrrolo[3,4-c]pyrrole-1,4-diyl)bis-, calcium salt, compd. with 1-octanamine (2:1:2) (9CI) (CA INDEX NAME)

CM 1

CRN 110893-39-5  
CMF C18 H12 N2 O8 S2



CM 2

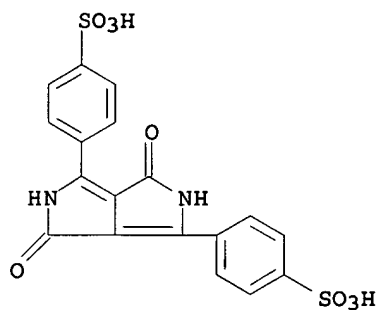
CRN 111-86-4  
CMF C8 H19 N

H<sub>2</sub>N-(CH<sub>2</sub>)<sub>7</sub>-Me

RN 160712-93-6 HCAPLUS  
CN Benzenesulfonic acid, 4,4'-(2,3,5,6-tetrahydro-3,6-dioxopyrrolo[3,4-c]pyrrole-1,4-diyl)bis-, magnesium salt, compd. with 1-octanamine (2:1:2) (9CI) (CA INDEX NAME)

CM 1

CRN 110893-39-5  
CMF C18 H12 N2 O8 S2



CM 2

CRN 111-86-4

CMF C8 H19 N

H<sub>2</sub>N- (CH<sub>2</sub>)<sub>7</sub>-Me

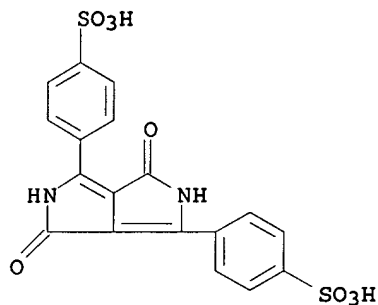
RN 160712-94-7 HCAPLUS

CN Benzenesulfonic acid, 4,4'-(2,3,5,6-tetrahydro-3,6-dioxopyrrolo[3,4-c]pyrrole-1,4-diyl)bis-, strontium salt, compd. with  
1-octadecanamine (2:1:2) (9CI) (CA INDEX NAME)

CM 1

CRN 110893-39-5

CMF C18 H12 N2 O8 S2



CM 2

CRN 124-30-1

CMF C18 H39 N

H<sub>2</sub>N- (CH<sub>2</sub>)<sub>17</sub>-Me

IC ICM C07D487-04

ICS C09B067-00; C09B067-18; C09B057-00

ICI C07D487-04, C07D209-00

CC 41-5 (Dyes, Organic Pigments, Fluorescent Brighteners, and  
Photographic Sensitizers)

Section cross-reference(s): 37

IT 160712-89-0P 160712-90-3P 160712-91-4P

160712-92-5P 160712-93-6P 160712-94-7P

RL: IMF (Industrial manufacture); PREP (Preparation)

(mixed crystals of **sulfonated** diketopyrrolopyrroles)

L64 ANSWER 33 OF 42 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1994:166871 HCAPLUS

DOCUMENT NUMBER: 120:166871

TITLE: Acid-curing coating compositions

INVENTOR(S): Mochizuki, Akimitsu; Hikosaka, Michichika

PATENT ASSIGNEE(S): TOYO INK Manufacturing Co., Ltd., Japan

SOURCE: Eur. Pat. Appl., 9 pp.

DOCUMENT TYPE: CODEN: EPXXDW  
 LANGUAGE: Patent  
 English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 566422	A1	19931020	EP 1993-302956	19930416
EP 566422	B1	19960619		
R: DE, GB				
JP 05295308	A2	19931109	JP 1992-124302	19920417
JP 2870295	B2	19990317		
US 5304245	A	19940419	US 1993-45948	19930415
CA 2094231	AA	19931018	CA 1993-2094231	19930416
PRIORITY APPLN. INFO.:			JP 1992-124302	A 19920417

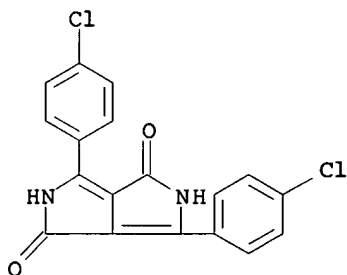
OTHER SOURCE(S): MARPAT 120:166871

AB Aggregate- and crystal-free title compns. with improved pigment dispersibility and good fluidity, providing high-gloss films with clear color tone, contain 0.5-30 parts sulfonic acid group-contg. anthraquinone compd. or its metal salt per 100 parts pigment. Thus, dispersing C.I. Pigment Red 178 and anthraquinone-2-sulfonic acid (I) in a varnish contg. a polyester polyol, melamine resin, and dodecylbenzenesulfonic acid catalyst gave a compn. with lower viscosity and less color sepn. during storage than a similar compn. not contg. I.

IT 84632-65-5, C.I. Pigment Red 254  
 RL: USES (Uses)  
 (pigments, dispersants for, anthraquinonesulfonic acid derivs., in acid-curing coating compns.)

RN 84632-65-5 HCAPLUS

CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis(4-chlorophenyl)-2,5-dihydro-  
 (9CI) (CA INDEX NAME)



IC ICM C09D005-00  
 ICS C09D017-00; C09D007-12; C09B067-22

CC 42-5 (Coatings, Inks, and Related Products)  
 IT 81-77-6, C.I. Pigment Blue 60 147-14-8, C.I. Pigment Blue 15:1  
 1047-16-1, C.I. Pigment Violet 19 1309-37-1, C.I. Pigment Red 101,  
 uses 3049-71-6, C.I. Pigment Red 178 4216-01-7, C.I. Pigment  
 Yellow 108 4424-06-0, C.I. Pigment Orange 43 5590-18-1, C.I.  
 Pigment Yellow 110 6410-41-9, C.I. Pigment Red 5 12225-06-8,  
 C.I. Pigment Red 176 84632-65-5, C.I. Pigment Red 254  
 215247-95-3, C.I. Pigment Violet 23  
 RL: USES (Uses)  
 (pigments, dispersants for, anthraquinonesulfonic acid  
 derivs., in acid-curing coating compns.)

L64 ANSWER 34 OF 42 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1993:582947 HCAPLUS  
 DOCUMENT NUMBER: 119:182947  
 TITLE: Pigment compositions and pigment dispersions  
 INVENTOR(S): Ide, Jusaku; Kikuchi, Jiro; Maejima, Masuhiko  
 PATENT ASSIGNEE(S): Toyo Ink Mfg Co, Japan  
 SOURCE: Jpn. Kokai Tokyo Koho, 9 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	
JP 05117541	A2	19930514	JP 1991-305413	199110 24
PRIORITY APPLN. INFO.:			JP 1991-305413	199110 24

AB The high-concn. title compns. with good fluidity, useful for  
 coatings and inks, comprise 100 parts pigments and 0.1-30 parts  
 pigment dispersants which are salts of (poly)oxyalkylene alkyl ether  
 sulfosuccinate ester Na salts and pigment derivs.  $P[X(CH_2)kNR_1R_2]_m$   
 [P = residue of  $\geq 1$  org. dye selected from azo,  
 phthalocyanine, quinacridone, anthraquinone, dioxazine,  
 anthrapyrimidine, anthanthrone, indanthrone, flavanthrone,  
 pyranthrone, perylene, perinone, thioindigo, diketopyrrolopyrrole,  
 isoindolinone, insoindoline, and quinophthalone; X = direct bond,  
 divalent group; R1-2 = H, (un)substituted alkyl, aryl or R1R2 = (N-  
 or O-contg.) heterocycle; k, m = 1-4]. Dispersions comprising the  
 pigment compns. and vehicles are also claimed. Thus, a pigment  
 compn. was prepd. from 95 parts C.I. Pigment Blue 15:3 and 5 parts  
 salt prepd. from 100 parts CuPcSO<sub>2</sub>NH(CH<sub>2</sub>)<sub>3</sub>NEt<sub>2</sub> (CuPc = residue of Cu  
 phthalocyanine) and 80 parts Me(CH<sub>2</sub>)<sub>10</sub>CO(C<sub>2</sub>H<sub>4</sub>O)<sub>4</sub>COCH(SO<sub>3</sub>Na)CH<sub>2</sub>CO<sub>2</sub>Na.  
 An offset printing ink prepd. from 15 parts of the compn. and 35  
 parts rosin-modified phenolic resin varnish showed good flowability.

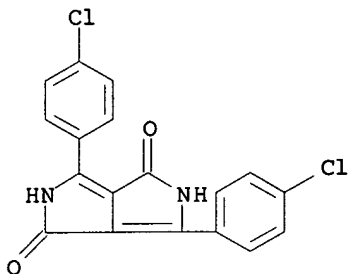
IT 84632-65-5, C.I. Pigment Red 254

RL: USES (Uses)  
 (pigment compns., for coatings and inks, with good fluidity,  
 dispersants for)

RN 84632-65-5 HCAPLUS

CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis(4-chlorophenyl)-2,5-dihydro-  
 (9CI) (CA INDEX NAME)





IT 150575-60-3P

RL: PREP (Preparation)

(prepn. of, dispersants, for pigments, in coatings and inks)

RN 150575-60-3 HCAPLUS

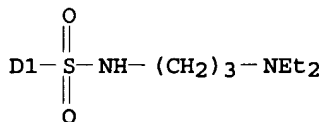
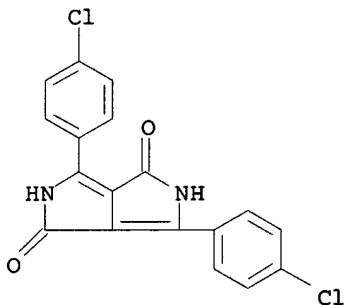
CN Benzenesulfonamide, 2(or 5)-chloro-5(or 2)-[4-(4-chlorophenyl)-  
2,3,5,6-tetrahydro-3,6-dioxopyrrolo[3,4-c]pyrrol-1-yl]-N-[3-  
(diethylamino)propyl]-, compd. with  $\alpha$ -(3-carboxy-1-  
oxosulfopropyl)- $\omega$ -[(1-oxododecyl)oxy]poly(oxy-1,2-ethanediyl)  
(9CI) (CA INDEX NAME)

CM 1

CRN 150419-05-9

CMF C25 H26 Cl2 N4 O4 S

CCI IDS



CM 2

CRN 119845-20-4

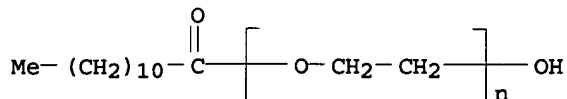
CMF (C2 H4 O)<sub>n</sub> C16 H28 O8 S

CCI IDS, PMS

CM 3

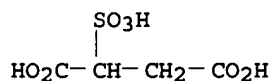
CRN 9004-81-3

CMF (C2 H4 O)<sub>n</sub> C12 H24 O2  
CCI PMS



CM 4

CRN 5138-18-1  
CMF C4 H6 O7 S



IC ICM C09B067-46  
ICS C09B067-20; C09C003-08; C09C003-10  
CC 42-6 (Coatings, Inks, and Related Products)  
Section cross-reference(s): 41  
IT 81-77-6, C.I. Pigment Blue 60 147-14-8, C.I. Pigment Blue 15:1  
1047-16-1, C.I. Pigment Violet 19 1328-53-6, C.I. Pigment Green 7  
4051-63-2, C.I. Pigment Red 177 5281-04-9, C.I. Pigment Red 57:1  
5521-31-3, C.I. Pigment Red 179 6358-85-6, C.I. Pigment Yellow 12  
68134-22-5, C.I. Pigment Yellow 154 84632-65-5, C.I.  
Pigment Red 254 215247-95-3, C.I. Pigment Violet 23  
RL: USES (Uses)  
(pigment compns., for coatings and inks, with good fluidity,  
dispersants for)  
IT 150419-04-8P 150419-07-1P 150431-69-9P 150521-50-9P  
150521-51-0P 150575-58-9P 150575-59-0P 150575-60-3P  
150575-61-4P 150575-62-5P 150575-63-6P 150575-69-2P  
150575-70-5P  
RL: PREP (Preparation)  
(prepn. of, dispersants, for pigments, in coatings and inks)

L64 ANSWER 35 OF 42 HCAPLUS COPYRIGHT 2006 ACS on STN  
ACCESSION NUMBER: 1993:451407 HCAPLUS  
DOCUMENT NUMBER: 119:51407  
TITLE: Pigment compositions for coatings and inks  
INVENTOR(S): Wooden, Gary; Wallquist, Olof  
PATENT ASSIGNEE(S): Ciba-Geigy A.-G., Switz.  
SOURCE: Ger. Offen., 7 pp.  
CODEN: GWXXBX  
DOCUMENT TYPE: Patent  
LANGUAGE: German  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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DE 4214868	A1	19921112	DE 1992-4214868	199205 05
CH 685162	A	19950413	CH 1991-1362	

Ross Shipe EIC 1700 Remsen 4B31 571/272-6018

				199105 07
KR 187516	B1	19990401	KR 1992-6861	199204 21
US 5271759	A	19931221	US 1992-877680	199205 01
CA 2068044	AA	19921108	CA 1992-2068044	199205 05
FR 2676232	A1	19921113	FR 1992-5498	199205 05
FR 2676232	B1	19930917		
GB 2255565	A1	19921111	GB 1992-9693	199205 06
GB 2255565	B2	19940810		
JP 05194873	A2	19930803	JP 1992-113847	199205 07
JP 3296587	B2	20020702		
PRIORITY APPLN. INFO.:			CH 1991-1362	A 199105 07

OTHER SOURCE(S): MARPAT 119:51407

AB The title compns., with good rheol., contain org. pigments, 0.05-10% (based on pigments) sulfonated pigments, and 0.05-10% (based on primary pigment) polymeric quaternary ammonium salt (mol. wt. 500-2,500,000) sol. in H<sub>2</sub>O or lower alcs. Heating MeO(CH<sub>2</sub>CH<sub>2</sub>O)<sub>n</sub>CH<sub>2</sub>CH<sub>2</sub>Br (prepd. from the polyglycol ether 35, Me<sub>3</sub>SiCl 27.2, and LiBr 17.4 g) with a 50% aq. soln. of 8.6 g polyethylenimine in 500 mL H<sub>2</sub>O at 100° for 24 h gave 59 g yellowish, oily polymer (I). Stirring 0.35 g I, 7.0 g 3,6-bis(4-methylphenyl)pyrrolo(3,4-c)pyrrole-1,4-dione, 0.07 g monosulfonated 3-(4-chlorophenyl)-6-phenylpyrrolo(3,4-c)pyrrole-1,4-dione, and 50 mL H<sub>2</sub>O at 75°, filtering, and drying gave 7.2 g red powder, which dispersed readily in an alkyd-melamine resin coating compn.

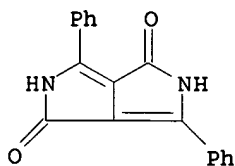
IT 54660-00-3D, sulfonated 84632-65-5D,  
sulfonated 110752-18-6

RL: USES (Uses)

(in pigment preps. for coatings and inks)

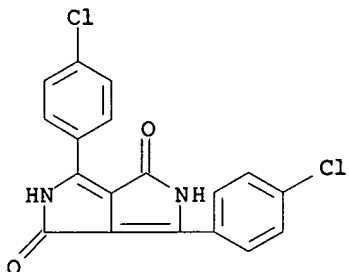
RN 54660-00-3 HCAPLUS

CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-3,6-diphenyl- (9CI)  
(CA INDEX NAME)



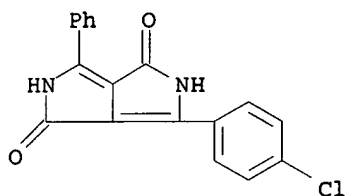
RN 84632-65-5 HCAPLUS

CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis(4-chlorophenyl)-2,5-dihydro-  
(9CI) (CA INDEX NAME)



RN 110752-18-6 HCAPLUS

CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3-(4-chlorophenyl)-2,5-dihydro-6-phenyl-, monosulfo deriv., monosodium salt (9CI) (CA INDEX NAME)

D1-SO<sub>3</sub>H

● Na

IC ICM C09B067-20

ICS C09D017-00; C09D011-02

ICA C09B029-00; C09B031-00; C09B033-00; C09B035-00; C09B003-14;  
C09B048-00; C09B047-04; C09B057-04; C09B057-12; C09B057-00;  
C09B025-00; C09B019-00; C09B001-00; C09B003-00; C09B005-00;  
C09B023-00; C09B023-14

CC 42-6 (Coatings, Inks, and Related Products)

IT 147-14-8D, Copper phthalocyanine, sulfonated 9002-98-6D,  
Polyethylenimine, reaction products with polyethylene glycol  
bromoethyl Me ether 54660-00-3D, sulfonated  
61374-11-6, Tinofix EW 84632-65-5D, sulfonated  
92450-98-1D, reaction products with polyethylenimine

110752-18-6

RL: USES (Uses)

(in pigment prepns. for coatings and inks)

L64 ANSWER 36 OF 42 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1991:634689 HCAPLUS

DOCUMENT NUMBER: 115:234689

TITLE: Pyrrolo[3,4-c]pyrrole-1,4-dione pigment  
compositions, their preparation and  
macromolecular materials containing them

INVENTOR(S): Wallquist, Olof; Iqbal, Abul

PATENT ASSIGNEE(S): Ciba-Geigy A.-G., Switz.

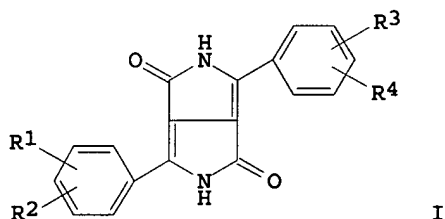
SOURCE: Ger. Offen., 8 pp.

CODEN: GWXXBX

DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

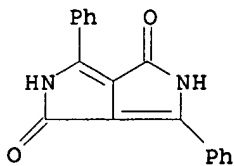
PATENT NO. -----	KIND ----	DATE -----	APPLICATION NO. -----	DATE
DE 4037556	A1	19910529	DE 1990-4037556	199011 26
GB 2238550	A1	19910605	GB 1990-25336	199011 21
GB 2238550 FR 2655051	B2 A1	19920401 19910531	FR 1990-14727	199011 26
FR 2655051 JP 03181569	B1 A2	19930903 19910807	JP 1990-328793	199011 28
JP 2931087	B2	19990809		198911 28
PRIORITY APPLN. INFO.:			CH 1989-4254	A

OTHER SOURCE(S): MARPAT 115:234689  
 GI

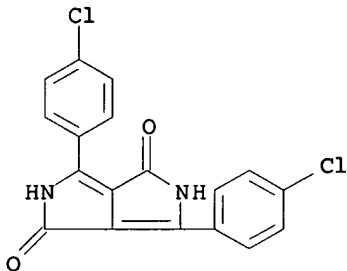


- AB The comps. contain (a)  $\geq 1$  pigment I ( $R_1$ - $R_4$  = H, Cl, Br, Me, OMe, Ph, CN) and (b) 0.5-10% (based on a) of a mixt. of  $\geq 3$  different sym. and asym. I ( $R_1$ - $R_4$  = H, Cl, Br, Me, OMe, Ph,  $SO_3$ -X<sup>+</sup>; X<sup>+</sup> = H<sup>+</sup>, (quaternary) ammonium, metal cation equiv.). I are used to color plastics and coatings and show good fastness properties. Thus, 4-ClC<sub>6</sub>H<sub>4</sub>CN 14.04, PhCN 10.3, and di-iso-Pr succinate 20.3 g were condensed in 120 mL tert-amyl alc. contg. 6.9 g Na and 0.1 g Na bis(2-ethylhexyl) sulfosuccinate to give 23.6 g red mixt. of I ( $R_1$  =  $R_2$  =  $R_3$  =  $R_4$  = H), I ( $R_1$  =  $R_3$  = H;  $R_2$  =  $R_4$  = p-Cl) (II), and I ( $R_1$  =  $R_2$  =  $R_3$  = H;  $R_4$  = p-Cl). The mixt. (20 g) was sulfonated with 160 g 25% oleum and 160 g H<sub>2</sub>SO<sub>4</sub>.H<sub>2</sub>O to give 29.0 red-violet powder (A). Wet II (964 g; 36.3% solids) made to a vol. of 8 L with water was stirred with 8.1 g A in 900 mL water and dewatered to give 352 g red powder, which was used to provide a red tint in an alkyd melamine stoving compn.
- IT 54660-00-3DP, sulfonated 84632-65-5DP, sulfonated 88949-37-5DP, sulfonated  
 RL: IMF (Industrial manufacture); PREP (Preparation)  
 (prepn. of, as colorant for plastics and coatings)

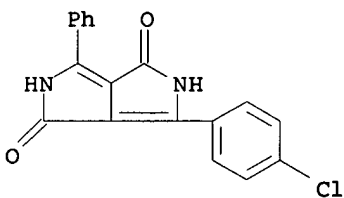
RN 54660-00-3 HCAPLUS

CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-3,6-diphenyl- (9CI)  
(CA INDEX NAME)

RN 84632-65-5 HCAPLUS

CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis(4-chlorophenyl)-2,5-dihydro-  
(9CI) (CA INDEX NAME)

RN 88949-37-5 HCAPLUS

CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3-(4-chlorophenyl)-2,5-dihydro-6-  
phenyl- (9CI) (CA INDEX NAME)

IC ICM C09B067-20

ICS C07D487-04; C09D017-00; C08K005-3415

ICA C09B057-00; C08J003-20; D01F001-04

ICI C07D487-04; C07D209-00

CC 41-5 (Dyes, Organic Pigments, Fluorescent Brighteners, and  
Photographic Sensitizers)

Section cross-reference(s): 42

IT 54660-00-3DP, sulfonated 54660-00-3P

84632-65-5DP, sulfonated 84632-65-5P

88949-37-5DP, sulfonated 88949-37-5P

RL: IMF (Industrial manufacture); PREP (Preparation)

(prepn. of, as colorant for plastics and coatings)

L64 ANSWER 37 OF 42 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1991:538314 HCAPLUS

DOCUMENT NUMBER: 115:138314

TITLE: Water-based coating materials containing partially sulfonated 1,4-diketo-3,6-diphenylpyrrolo[3,4-c]pyrrole and quinacridone derivatives as pigments

INVENTOR(S): Jaffe, Edward Ephraim; Wallquist, Olof; Verhaegen, Rudy

PATENT ASSIGNEE(S): Ciba-Geigy A.-G., Switz.

SOURCE: Eur. Pat. Appl., 14 pp.  
CODEN: EPXXDW

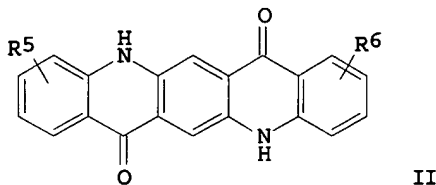
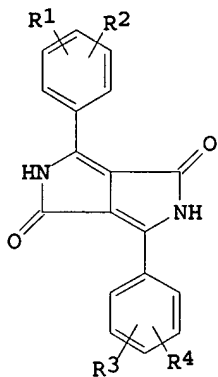
DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 430875	A2	19910605	EP 1990-810889	19901120
EP 430875	A3	19920805		
R: DE, FR, GB, IT				
JP 03210375	A2	19910913	JP 1990-328794	19901128
KR 155378	B1	19981116	KR 1990-19354	19901128
PRIORITY APPLN. INFO.:		US 1989-442092	A	19891128
OTHER SOURCE(S):		MARPAT 115:138314		
GI				



AB Pigments with good rheol. properties for use in aq. automotive coatings are prepd. by partial sulfonation of pyrrolopyrroles I (R1, R3 = H, Cl, Br, Me, OMe, CN, Ph; R2, R4 = H, Cl, Br, Me) and quinacridones II (R5, R6 = H, Cl, Br, Me, OMe). Sulfonation of I (R1-4 = H) (III) with H2SO4 and treatment of the product with CaCl2 gave a mixt. of 98% III and 2% sulfonated III (Ca salt). The mixt.

was added to an aq. polyester polyurethane dispersion, giving better rheol. and color than the unsulfonated III.

IT 54660-00-3D, sulfonated, salts 84632-54-2D

, sulfonated, salts 84632-65-5D,

sulfonated, salts 84632-66-6D, sulfonated

, salts 88949-33-1D, sulfonated, salts

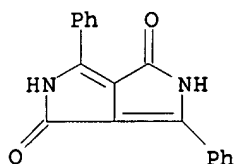
RL: USES (Uses)

(pigments contg., for aq. automotive paints)

RN 54660-00-3 HCAPLUS

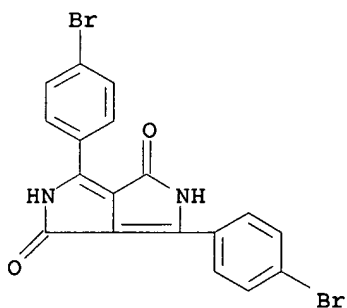
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-3,6-diphenyl- (9CI)

(CA INDEX NAME)



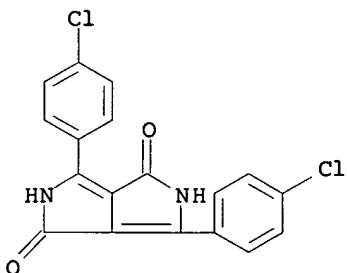
RN 84632-54-2 HCAPLUS

CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis(4-bromophenyl)-2,5-dihydro- (9CI) (CA INDEX NAME)



RN 84632-65-5 HCAPLUS

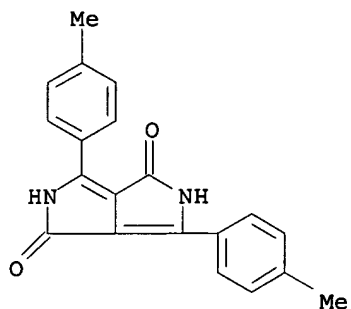
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis(4-chlorophenyl)-2,5-dihydro- (9CI) (CA INDEX NAME)



RN 84632-66-6 HCAPLUS

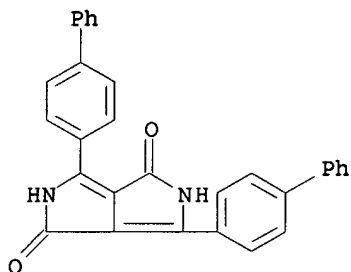
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-3,6-bis(4-methylphenyl)- (9CI) (CA INDEX NAME)





RN 88949-33-1 HCAPLUS

CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis([1,1'-biphenyl]-4-yl)-2,5-dihydro- (9CI) (CA INDEX NAME)



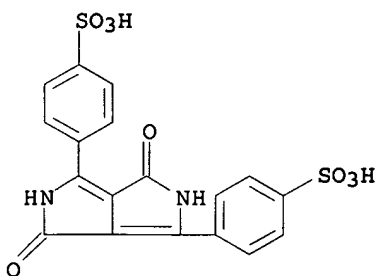
IT 110893-42-0 136196-61-7

RL: USES (Uses)

(pigments contg., for aq. paints)

RN 110893-42-0 HCAPLUS

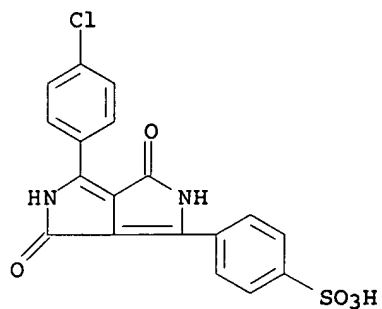
CN Benzenesulfonic acid, 4,4'-(2,3,5,6-tetrahydro-3,6-dioxopyrrolo[3,4-c]pyrrole-1,4-diyl)bis-, disodium salt (9CI) (CA INDEX NAME)



● 2 Na

RN 136196-61-7 HCAPLUS

CN Benzenesulfonic acid, 4-[4-(4-chlorophenyl)-2,3,5,6-tetrahydro-3,6-dioxopyrrolo[3,4-c]pyrrol-1-yl]-, monosodium salt (9CI) (CA INDEX NAME)



● Na

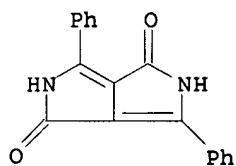
IT 54660-00-3 84632-65-5 88949-37-5

RL: USES (Uses)

(pigments, partial sulfonation of, for aq. paints)

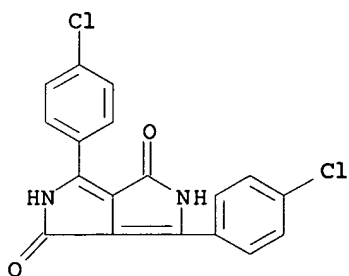
RN 54660-00-3 HCAPLUS

CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-3,6-diphenyl- (9CI)  
(CA INDEX NAME)



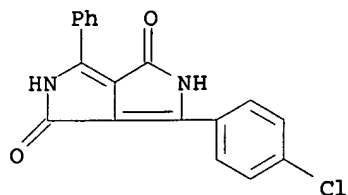
RN 84632-65-5 HCAPLUS

CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis(4-chlorophenyl)-2,5-dihydro-  
(9CI) (CA INDEX NAME)



RN 88949-37-5 HCAPLUS

CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3-(4-chlorophenyl)-2,5-dihydro-6-  
phenyl- (9CI) (CA INDEX NAME)



IC ICM C09D005-02  
ICS C09D007-12  
CC 42-6 (Coatings, Inks, and Related Products)  
Section cross-reference(s): 41  
IT 54660-00-3D, sulfonated, salts 75431-69-5  
84632-54-2D, sulfonated, salts 84632-65-5D  
, sulfonated, salts 84632-66-6D,  
sulfonated, salts 88949-33-1D, sulfonated  
, salts  
RL: USES (Uses)  
(pigments contg., for aq. automotive paints)  
IT 110893-42-0 136196-61-7  
RL: USES (Uses)  
(pigments contg., for aq. paints)  
IT 54660-00-3 84632-65-5 88949-37-5  
RL: USES (Uses)  
(pigments, partial sulfonation of, for aq. paints)

L64 ANSWER 38 OF 42 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1991:494495 HCAPLUS

DOCUMENT NUMBER: 115:94495

TITLE: Dispersants for pyrrolopyrroledione pigments for coatings and inks

INVENTOR(S): Sawamura, Katsuhiko; Hayashi, Mikio

PATENT ASSIGNEE(S): Toyo Ink Mfg. Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

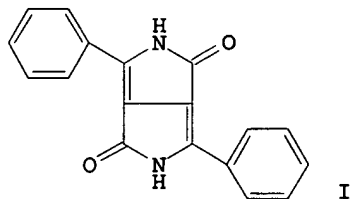
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 03045662	A2	19910227	JP 1989-181517	19890713
JP 2507810	B2	19960619		
PRIORITY APPLN. INFO.:			JP 1989-181517	19890713

OTHER SOURCE(S): MARPAT 115:94495

GI



AB The title dispersants are prepd. by reaction of pyrrolopyrrolediones with (alkoxymethylated) aminoplasts, phthalamides, and/or N-methylolphthalamide. Thus, C.I. Pigment Yellow 108 (I) contg. a dispersant prepd. from I, dimethylolbenzguanamine, and tetrachlorophthalamide showed good color and storage stability.

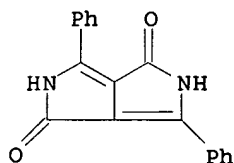
IT 54660-00-3D, reaction products with aminoplasts and phthalimides 84632-61-1D, reaction products with aminoplasts and phthalimides 88949-37-5D, reaction products with aminoplasts and phthalimides 88949-42-2D, reaction products with aminoplasts and phthalimides

RL: USES (Uses)

(dispersing agents, for pyrrolopyrroledione pigments)

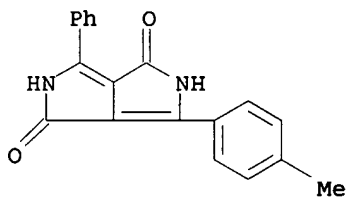
RN 54660-00-3 HCAPLUS

CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-3,6-diphenyl- (9CI)  
(CA INDEX NAME)



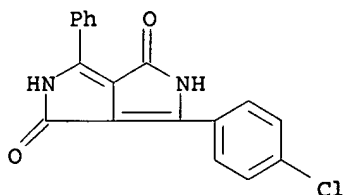
RN 84632-61-1 HCAPLUS

CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-3-(4-methylphenyl)-6-phenyl- (9CI) (CA INDEX NAME)



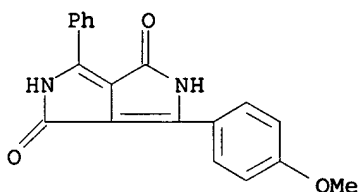
RN 88949-37-5 HCAPLUS

CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3-(4-chlorophenyl)-2,5-dihydro-6-phenyl- (9CI) (CA INDEX NAME)



RN 88949-42-2 HCAPLUS

CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-3-(4-methoxyphenyl)-6-phenyl- (9CI) (CA INDEX NAME)



IC ICM C09C003-08

ICS B01F017-32; C09B067-20; C09D007-12; C09D011-02

CC 42-6 (Coatings, Inks, and Related Products)

Section cross-reference(s): 46

IT 89-40-7 118-29-6D, reaction products with aminoplasts and pyrrolopyrrolediones 1571-13-7D, reaction products with aminoplasts and pyrrolopyrrolediones 4407-90-3D, reaction products with phthalimides and pyrrolopyrrolediones 9003-08-1D, Formaldehyde-melamine copolymer, reaction products with phthalimides and pyrrolopyrrolediones 9011-05-6D, Formaldehyde-urea copolymer, reaction products with phthalimides and pyrrolopyrrolediones 22546-83-4D, reaction products with aminoplasts and pyrrolopyrrolediones 54660-00-3D, reaction products with aminoplasts and phthalimides 84632-61-1D, reaction products with aminoplasts and phthalimides 88949-37-5D, reaction products with aminoplasts and phthalimides 88949-42-2D, reaction products with aminoplasts and phthalimides

RL: USES (Uses)

(dispersing agents, for pyrrolopyrroledione pigments)

L64 ANSWER 39 OF 42 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1991:473685 HCAPLUS

DOCUMENT NUMBER: 115:73685

TITLE: Dispersing agents for pigments and pigment compositions

INVENTOR(S): Sawamura, Katsuhiko; Hayashi, Mikio

PATENT ASSIGNEE(S): Toyo Ink Mfg. Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	
JP 03026767	A2	19910205	JP 1989-161905	198906 23
JP 2584515	B2	19970226		
PRIORITY APPLN. INFO.:			JP 1989-161905	198906 23

OTHER SOURCE(S): MARPAT 115:73685

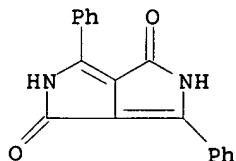
GI For diagram(s), see printed CA Issue.

AB Dispersing agents such as I, II, etc. are prepd. Thus, III was chlorosulfonated, treated with N,N-diethylaminopropylamine to give I, and used as a dispersing agent for Irgazin DPP Red BO in an alkyd-melamine resin varnish.

IT 54660-00-3  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(chlorosulfonation of)

RN 54660-00-3 HCAPLUS

CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-3,6-diphenyl- (9CI)  
(CA INDEX NAME)



IC ICM C09C003-08  
ICS C09B067-20

CC 42-6 (Coatings, Inks, and Related Products)

IT 54660-00-3  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(chlorosulfonation of)

L64 ANSWER 40 OF 42 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1988:169282 HCAPLUS

DOCUMENT NUMBER: 108:169282

TITLE: Polyurethane surface-modified pigment compositions and their use in coatings

INVENTOR(S): Jaffe, Edward E.

PATENT ASSIGNEE(S): Ciba-Geigy A.-G., Switz.

SOURCE: Eur. Pat. Appl., 16 pp.  
CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	
EP 243304	A2	19871028	EP 1987-810197	198704 02
EP 243304	A3	19901227		
EP 243304	B1	19930602		

R: BE, DE, FR, GB, NL, SE  
 CA 1309207 A1 19921020 CA 1987-533897 198704  
 06  
 JP 62295966 A2 19871223 JP 1987-84925 198704  
 08  
 JP 08016200 B4 19960221  
 US 4844742 A 19890704 US 1987-51098 198705  
 15  
 PRIORITY APPLN. INFO.: US 1986-849338 A 198604  
 08

AB Pigments giving auto finishes with improved rheol., gloss, and pigment vol. concn. and lower volatile org. concns. are treated with 1-10% deriv. of the primary pigment for improved dispersion and 3-20% solvent-free basic dispersants, e.g., polyurethanes. A slurry of 2640 parts  $\gamma$ -quinacridone in 6820 parts H<sub>2</sub>O was stirred with 20.43 parts 2-(phthalimidomethyl)quinacridone dispersed in 270 parts H<sub>2</sub>O for 30 min, mixed with 41.2 parts Disperbyk 160 (polyurethane) in 144 parts acetone, stirred 2.5 h, filtered, washed, dried at 80°, and pulverized. An alkyd paint contg. 12.5% this pigment (pigment-binder ratio 0.3:1) was coated on primed Al panel to give coatings with 20° gloss 89, vs. 80 with untreated pigment.

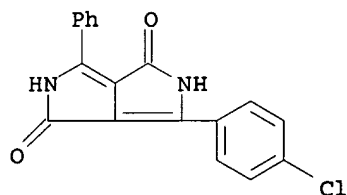
IT 110752-18-6 114054-68-1

RL: USES (Uses)

(pigment treatment with, for improved dispersion)

RN 110752-18-6 HCAPLUS

CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3-(4-chlorophenyl)-2,5-dihydro-6-phenyl-, monosulfo deriv., monosodium salt (9CI) (CA INDEX NAME)

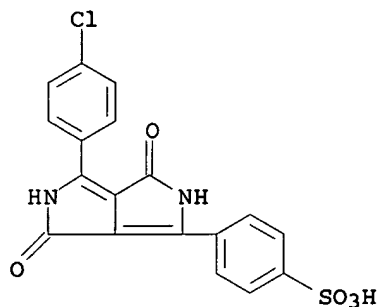


D1-SO<sub>3</sub>H

● Na

RN 114054-68-1 HCAPLUS

CN Benzenesulfonic acid, 4-[4-(4-chlorophenyl)-2,3,5,6-tetrahydro-3,6-dioxopyrrolo[3,4-c]pyrrol-1-yl]-, calcium salt (2:1) (9CI) (CA INDEX NAME)



● 1/2 Ca

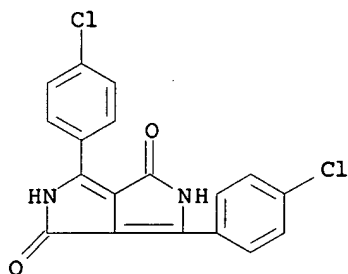
IT 84632-65-5 88949-37-5

RL: USES (Uses)

(pigments, surface treatment of, for improved dispersion)

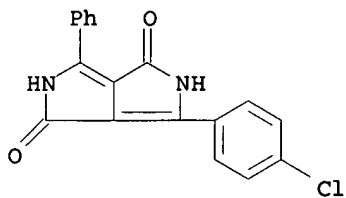
RN 84632-65-5 HCAPLUS

CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis(4-chlorophenyl)-2,5-dihydro-  
(9CI) (CA INDEX NAME)



RN 88949-37-5 HCAPLUS

CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3-(4-chlorophenyl)-2,5-dihydro-6-  
phenyl- (9CI) (CA INDEX NAME)



IC ICM C09B067-20

ICS C09B067-08; C09B067-22

ICA C09B048-00; C09B057-00

CC 42-6 (Coatings, Inks, and Related Products)

Section cross-reference(s): 41

IT 32713-54-5 75641-02-0 110752-18-6 113834-89-2

114054-68-1



RL: USES (Uses)

(pigment treatment with, for improved dispersion)

IT 1047-16-1 84632-65-5 88949-37-5

RL: USES (Uses)

(pigments, surface treatment of, for improved dispersion)

L64 ANSWER 41 OF 42 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1987:578038 HCAPLUS

DOCUMENT NUMBER: 107:178038

TITLE: Pyrrolo[3,4-C]pyrrole pigments for high molecular weight organic polymers

INVENTOR(S): Jost, Max; Iqbal, Abul; Rochat, Alain Claude

PATENT ASSIGNEE(S): Ciba-Geigy A.-G., Switz.

SOURCE: Eur. Pat. Appl., 17 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

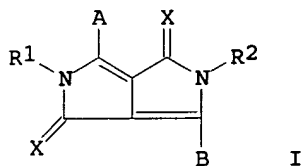
LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

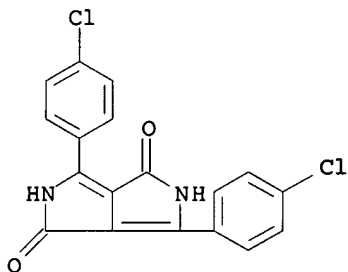
PATENT INFORMATION:

PATENT NO. -----	KIND ----	DATE -----	APPLICATION NO. -----	DATE
EP 224445	A2	19870603	EP 1986-810532	198611 20
EP 224445	A3	19890315		
EP 224445	B1	19910904		
R: CH, DE, FR, GB, IT, LI				
US 4791204	A	19881213	US 1986-932258	198611 19
JP 62149759	A2	19870703	JP 1986-276908	198611 21
JP 2551565	B2	19961106		
CA 1289964	A1	19911001	CA 1986-523620	198611 24
US 4914211	A	19900403	US 1988-231324	198808 12
JP 07173406	A2	19950711	JP 1994-211203	199409 05
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			US 1986-932258	A3 198611 19

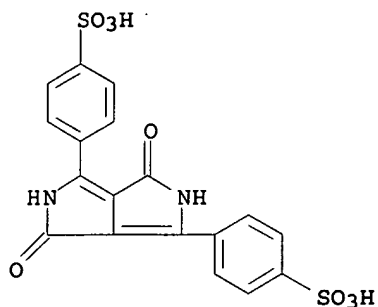
GI



- AB The title compds. I [A, B = alkyl, arylalkyl, aryl, arom. heterocyclic moiety; R1, R2 = H, (un)substituted alkyl, alkenyl, alkynyl, arylalkyl, cycloalkyl, H2NCO, alkylcarbamoyl, arylcarbamoyl, alkoxycarbonyl, aryl, alkanoyl, aroyl; X = O, S), useful as pigments for high mol. wt. org. polymers, lacquers, and coating materials, are prepd. by the cyclocondensation of nitriles and succinate esters in the presence of strong bases. Thus, 3-NCC6H4CO2Pr-iso, tert-BuLi, and iso-PrO2C(CH2)2CO2Pr-iso were heated to reflux for 5 h, cooled, MeOH added, the mixt. slowly neutralized with AcOH and MeOH, filtered, and sapond., forming II (A = B = 3-C6H4CO2H, R1 = R2 = H, X = O), an orange powder.
- IT 84632-65-5 110893-33-9  
RL: USES (Uses)  
(manuf. of mixts. contg., as pigments for plastics)
- RN 84632-65-5 HCAPLUS
- CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis(4-chlorophenyl)-2,5-dihydro-(9CI) (CA INDEX NAME)



- RN 110893-33-9 HCAPLUS
- CN Benzenesulfonic acid, 4,4'-(2,3,5,6-tetrahydro-3,6-dioxopyrrolo[3,4-c]pyrrole-1,4-diyl)bis-, aluminum salt (3:2) (9CI) (CA INDEX NAME)



● 2/3 Al

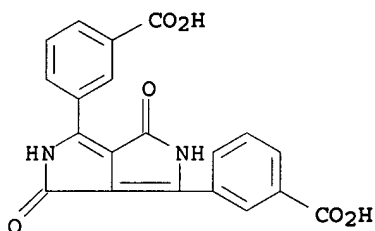
IT 110893-34-0P 110893-35-1P 110893-36-2P

RL: PREP (Preparation)

(manuf. of, as orange pigment for plastics)

RN 110893-34-0 HCAPLUS

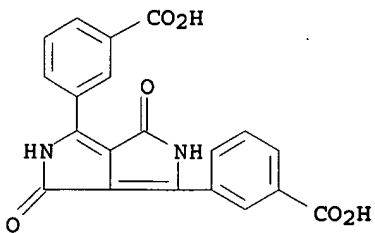
CN Benzoic acid, 3,3'-(2,3,5,6-tetrahydro-3,6-dioxopyrrolo[3,4-c]pyrrole-1,4-diyl)bis-, calcium salt (1:1) (9CI) (CA INDEX NAME)



● Ca

RN 110893-35-1 HCAPLUS

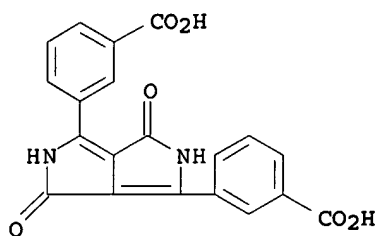
CN Benzoic acid, 3,3'-(2,3,5,6-tetrahydro-3,6-dioxopyrrolo[3,4-c]pyrrole-1,4-diyl)bis-, zinc salt (1:1) (9CI) (CA INDEX NAME)



● Zn

RN 110893-36-2 HCAPLUS

CN Benzoic acid, 3,3'-(2,3,5,6-tetrahydro-3,6-dioxopyrrolo[3,4-c]pyrrole-1,4-diyl)bis- (9CI) (CA INDEX NAME)



IT 110752-18-6P 110777-37-2P 110893-40-8P

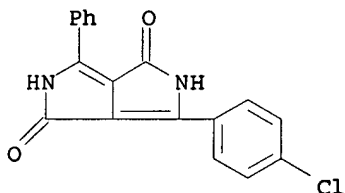
110893-43-1P 110893-44-2P

RL: PREP (Preparation)

(manuf. of, as pigment for plastics)

RN 110752-18-6 HCAPLUS

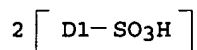
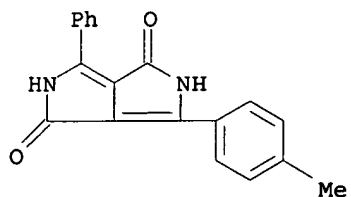
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3-(4-chlorophenyl)-2,5-dihydro-6-phenyl-, monosulfo deriv., monosodium salt (9CI) (CA INDEX NAME)

D1--SO<sub>3</sub>H

● Na

RN 110777-37-2 HCAPLUS

CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-3-(4-methylphenyl)-6-phenyl-, disulfo deriv., disodium salt (9CI) (CA INDEX NAME)

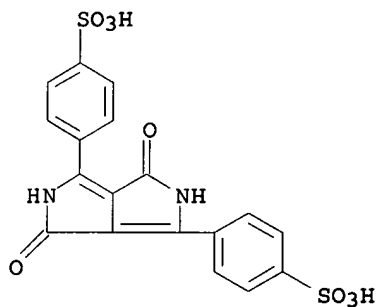


●2 Na

RN 110893-40-8 HCAPLUS  
 CN Benzenesulfonic acid, 4,4'-(2,3,5,6-tetrahydro-3,6-dioxopyrrolo[3,4-c]pyrrole-1,4-diyl)bis-, compd. with 1,6-hexanediamine (1:1) (9CI)  
 (CA INDEX NAME)

CM 1

CRN 110893-39-5  
 CMF C18 H12 N2 O8 S2

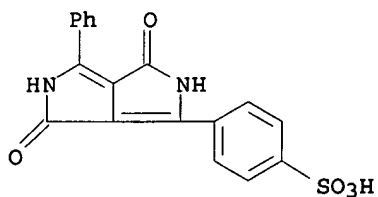


CM 2

CRN 124-09-4  
 CMF C6 H16 N2

H<sub>2</sub>N-(CH<sub>2</sub>)<sub>6</sub>-NH<sub>2</sub>

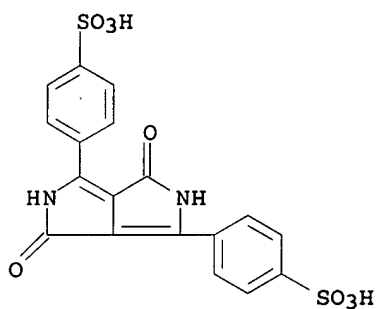
RN 110893-43-1 HCAPLUS  
 CN Benzenesulfonic acid, 4-(2,3,5,6-tetrahydro-3,6-dioxo-4-phenylpyrrolo[3,4-c]pyrrol-1-yl)-, monoammonium salt (9CI) (CA INDEX NAME)



● NH<sub>3</sub>

RN 110893-44-2 HCAPLUS

CN Benzenesulfonic acid, 4,4'-(2,3,5,6-tetrahydro-3,6-dioxopyrrolo[3,4-c]pyrrole-1,4-diyl)bis-, barium salt (1:1) (9CI) (CA INDEX NAME)



● Ba

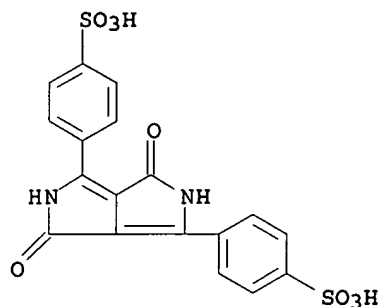
IT 110893-41-9P 110893-42-0P

RL: PREP (Preparation)

(manuf. of, as red pigment for plastics)

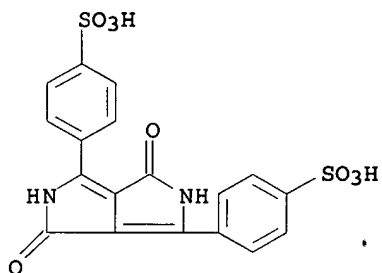
RN 110893-41-9 HCAPLUS

CN Benzenesulfonic acid, 4,4'-(2,3,5,6-tetrahydro-3,6-dioxopyrrolo[3,4-c]pyrrole-1,4-diyl)bis-, magnesium salt (1:1) (9CI) (CA INDEX NAME)



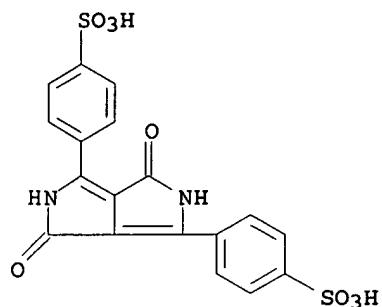
● Mg

RN 110893-42-0 HCAPLUS  
 CN Benzenesulfonic acid, 4,4'-(2,3,5,6-tetrahydro-3,6-dioxopyrrolo[3,4-c]pyrrole-1,4-diyl)bis-, disodium salt (9CI) (CA INDEX NAME)

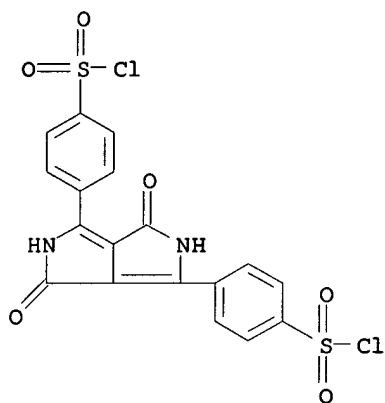


●2 Na

IT 110893-39-5P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);  
 RACT (Reactant or reagent)  
 (prepn. and reaction of, with **chlorosulfonic acid**,  
**disulfonylchloride** compd. from)  
 RN 110893-39-5 HCAPLUS  
 CN Benzenesulfonic acid, 4,4'-(2,3,5,6-tetrahydro-3,6-dioxopyrrolo[3,4-c]pyrrole-1,4-diyl)bis- (9CI) (CA INDEX NAME)

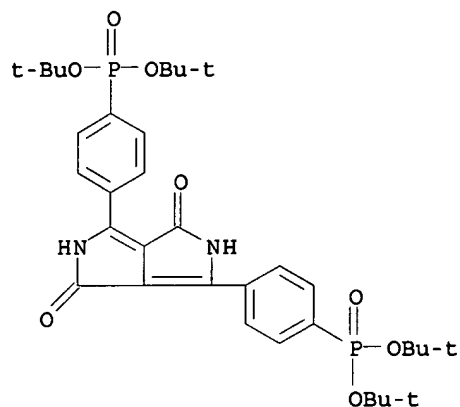


IT 110893-38-4P  
 RL: IMF (Industrial manufacture); PREP (Preparation)  
 (prepn. of)  
 RN 110893-38-4 HCAPLUS  
 CN Benzenesulfonyl chloride, 4,4'-(2,3,5,6-tetrahydro-3,6-dioxopyrrolo[3,4-c]pyrrole-1,4-diyl)bis- (9CI) (CA INDEX NAME)



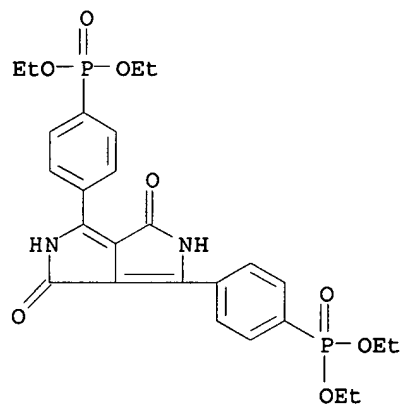
IT 110893-31-7 110893-32-8 110916-40-0  
 RL: USES (Uses)  
 (prepn. of mixts. contg., as pigments for plastics)  
 RN 110893-31-7 HCAPLUS  
 CN Phosphonic acid, [(2,3,5,6-tetrahydro-3,6-dioxopyrrolo[3,4-c]pyrrole-1,4-diyl)di-4,1-phenylene]bis-, tetrakis(1,1-dimethylethyl) ester (9CI) (CA INDEX NAME)





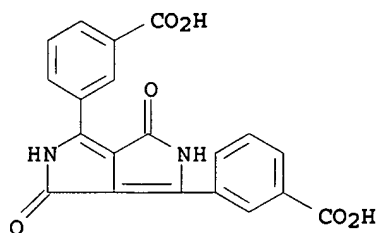
RN 110893-32-8 HCAPLUS

CN Phosphonic acid, [(2,3,5,6-tetrahydro-3,6-dioxopyrrolo[3,4-c]pyrrole-1,4-diyl)di-4,1-phenylene]bis-, tetraethyl ester (9CI) (CA INDEX NAME)



RN 110916-40-0 HCAPLUS

CN Benzoic acid, 3,3'-(2,3,5,6-tetrahydro-3,6-dioxopyrrolo[3,4-c]pyrrole-1,4-diyl)bis-, barium salt (1:1) (9CI) (CA INDEX NAME)



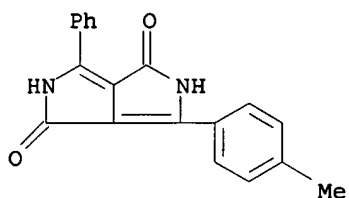
● Ba

IT 84632-61-1 88949-33-1 88949-37-5

RL: RCT (Reactant); RACT (Reactant or reagent)  
(sulfonation of, in manuf. of pigments for plastics)

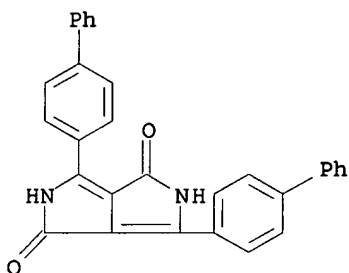
RN 84632-61-1 HCAPLUS

CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-3-(4-methylphenyl)-6-phenyl- (9CI) (CA INDEX NAME)



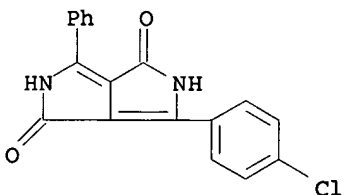
RN 88949-33-1 HCAPLUS

CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis([1,1'-biphenyl]-4-yl)-2,5-dihydro- (9CI) (CA INDEX NAME)



RN 88949-37-5 HCAPLUS

CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3-(4-chlorophenyl)-2,5-dihydro-6-phenyl- (9CI) (CA INDEX NAME)

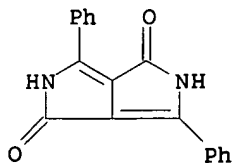


IT 54660-00-3

RL: RCT (Reactant); RACT (Reactant or reagent)  
(sulfonation of, with fuming sulfuric acid)

RN 54660-00-3 HCAPLUS

CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-3,6-diphenyl- (9CI)  
(CA INDEX NAME)



IC ICM C09B067-22  
 ICS C09B057-00; C09B063-00; C07D487-04; C08K005-34  
 ICI C07D487-04, C07D209-00  
 CC 41-5 (Dyes, Organic Pigments, Fluorescent Brighteners, and  
 Photographic Sensitizers)  
 Section cross-reference(s): 28, 37, 42  
 IT 84632-65-5 110893-33-9  
 RL: USES (Uses)  
 (manuf. of mixts. contg., as pigments for plastics)  
 IT 110893-34-0P 110893-35-1P 110893-36-2P  
 RL: PREP (Preparation)  
 (manuf. of, as orange pigment for plastics)  
 IT 110752-18-6P 110777-37-2P 110893-40-8P  
 110893-43-1P 110893-44-2P  
 RL: PREP (Preparation)  
 (manuf. of, as pigment for plastics)  
 IT 110893-41-9P 110893-42-0P  
 RL: PREP (Preparation)  
 (manuf. of, as red pigment for plastics)  
 IT 110893-39-5P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);  
 RACT (Reactant or reagent)  
 (prepn. and reaction of, with chlorosulfonic acid,  
 disulfonylchloride compd. from)  
 IT 110893-38-4P  
 RL: IMF (Industrial manufacture); PREP (Preparation)  
 (prepn. of)  
 IT 88949-28-4 110893-31-7 110893-32-8  
 110916-40-0  
 RL: USES (Uses)  
 (prepn. of mixts. contg., as pigments for plastics)  
 IT 84632-61-1 88949-33-1 88949-37-5  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (sulfonation of, in manuf. of pigments for plastics)  
 IT 54660-00-3  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (sulfonation of, with fuming sulfuric acid)

L64 ANSWER 42 OF 42 HCAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 1983:73838 HCAPLUS  
 DOCUMENT NUMBER: 98:73838  
 TITLE: 1,4-Diketopyrrolo[3,4-c]pyrrole pigments  
 INVENTOR(S): Iqbal, Abul; Cassar, Luigi  
 PATENT ASSIGNEE(S): Ciba-Geigy A.-G. , Switz.  
 SOURCE: Eur. Pat. Appl., 31 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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Ross Shipe EIC 1700 Remsen 4B31 571/272-6018

----- EP 61426	A1	19820929	EP 1982-810115	198203 15
EP 61426 R: BE, CH, DE, FR, GB, IT, NL, SE US 4415685	B1 A	19850213 19831115	US 1982-358734	198203 16
ES 510572	A1	19830201	ES 1982-510572	198203 18
CA 1190929	A1	19850723	CA 1982-398718	198203 18
DK 8201247	A	19820921	DK 1982-1247	198203 19
DK 172714 AU 8281715	B1 A1	19990614 19820923	AU 1982-81715	198203 19
AU 552023 ZA 8201857	B2 A	19860522 19830126	ZA 1982-1857	198203 19
BR 8201529	A	19830208	BR 1982-1529	198203 19
DD 202194	A5	19830831	DD 1982-238310	198203 19
CS 228540	P	19840514	CS 1982-1926	198203 19
HU 32388	O	19840730	HU 1982-847	198203 19
HU 188164 PL 130581	B B1	19860328 19840831	PL 1982-235515	198203 19
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JP 57172937	A2	19821025	JP 1982-45503	198203 20
JP 63059424 US 4490542	B4 A	19881118 19841225	US 1983-519170	198308 01
AU 8654832	A1	19860821	AU 1986-54832	198603 18
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20

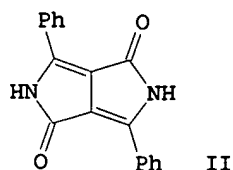
US 1982-358734

A3

198203

16

GI



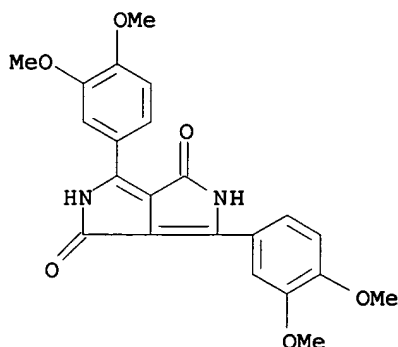
AB Coatings, fibers, and plastics are dyed yellow to violet shades with high color strength, satn., and fastness by using 3,6-diaryl-1,4-diketopyrrolo[3,4-c]pyrrole pigments (I) prepd. by heating benzonitriles with bromoacetic acid esters and Zn in an inert solvent. Thus, a mixt. of PhCN [100-47-0] and BrCH<sub>2</sub>CO<sub>2</sub>Et [105-36-2] in xylene was added dropwise to Cu-activated Zn powder in xylene under an Ar atm. Exothermic reaction at 60°, followed by heating and addn. of the remainder of the reactants at 90°, refluxing in the presence of air, and treating the product with NaOMe in DMF gave II [54660-00-3], a red powder. Numerous other I were prepd., and examples of their use as pigments in a wide variety of substrates are described in detail.

IT 84632-45-1P 84632-46-2P 84632-47-3P  
 84632-48-4P 84632-49-5P 84632-50-8P  
 84632-51-9P 84632-52-0P 84632-53-1P  
 84632-54-2P 84632-56-4P 84632-57-5P  
 84632-58-6P 84632-59-7P 84632-60-0P  
 84632-61-1P 84632-62-2P 84632-63-3P  
 84632-64-4P 84632-65-5P 84632-66-6P  
 84632-67-7P

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (manuf. of as pigment for polymeric materials)

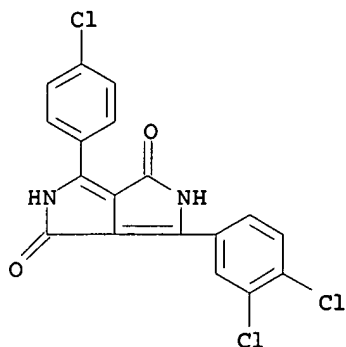
RN 84632-45-1 HCAPLUS

CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis(3,4-dimethoxyphenyl)-2,5-dihydro- (9CI) (CA INDEX NAME)



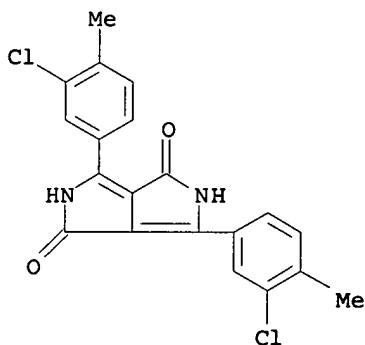
RN 84632-46-2 HCAPLUS

CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3-(4-chlorophenyl)-6-(3,4-dichlorophenyl)-2,5-dihydro- (9CI) (CA INDEX NAME)



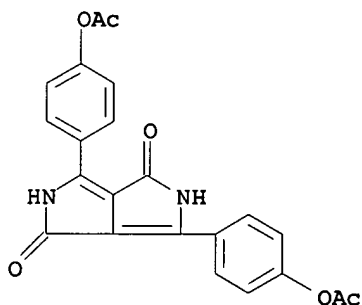
RN 84632-47-3 HCAPLUS

CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis(3-chloro-4-methylphenyl)-2,5-dihydro- (9CI) (CA INDEX NAME)



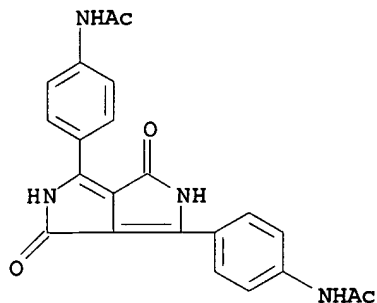
RN 84632-48-4 HCAPLUS

CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis[4-(acetyloxy)phenyl]-2,5-dihydro- (9CI) (CA INDEX NAME)



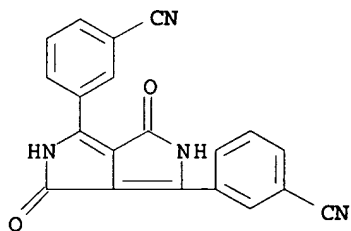
RN 84632-49-5 HCAPLUS

CN Acetamide, N,N'-[(2,3,5,6-tetrahydro-3,6-dioxopyrrolo[3,4-c]pyrrole-1,4-diyl)di-4,1-phenylene]bis- (9CI) (CA INDEX NAME)



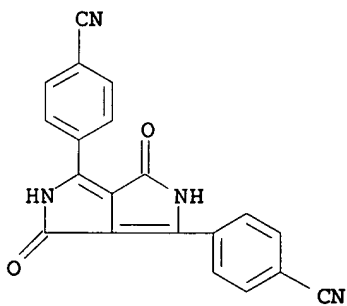
RN 84632-50-8 HCAPLUS

CN Benzonitrile, 3,3'-[(2,3,5,6-tetrahydro-3,6-dioxopyrrolo[3,4-c]pyrrole-1,4-diyl)bis- (9CI) (CA INDEX NAME)



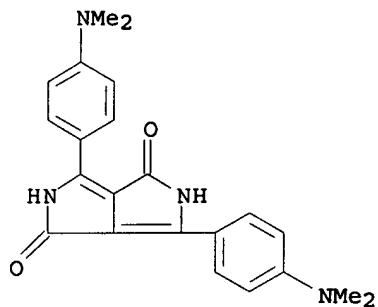
RN 84632-51-9 HCAPLUS

CN Benzonitrile, 4,4'-[(2,3,5,6-tetrahydro-3,6-dioxopyrrolo[3,4-c]pyrrole-1,4-diyl)bis- (9CI) (CA INDEX NAME)

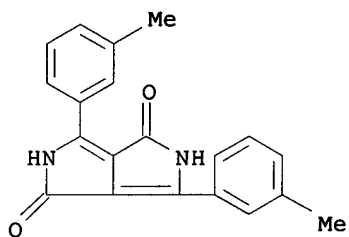


RN 84632-52-0 HCAPLUS

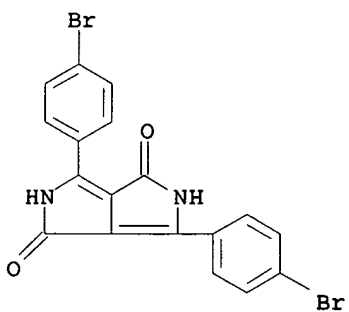
CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis[4-(dimethylamino)phenyl]-2,5-dihydro- (9CI) (CA INDEX NAME)



RN 84632-53-1 HCAPLUS

CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-3,6-bis(3-methylphenyl)-  
(9CI) (CA INDEX NAME)

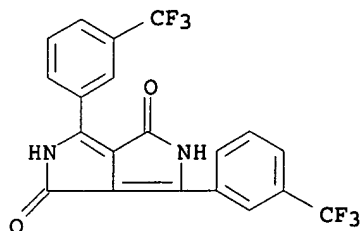
RN 84632-54-2 HCAPLUS

CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis(4-bromophenyl)-2,5-dihydro-  
(9CI) (CA INDEX NAME)

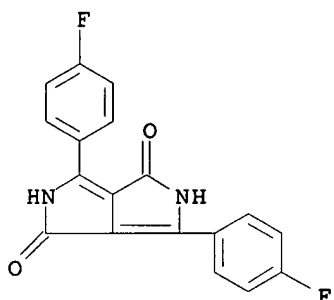
RN 84632-56-4 HCAPLUS

CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-3,6-bis[3-(trifluoromethyl)phenyl]- (9CI) (CA INDEX NAME)



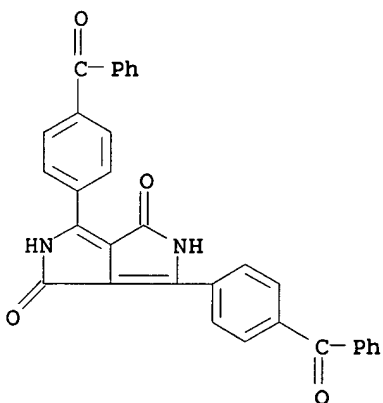


RN 84632-57-5 HCAPLUS

CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis(4-fluorophenyl)-2,5-dihydro-  
(9CI) (CA INDEX NAME)

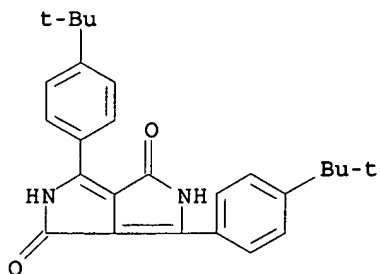
RN 84632-58-6 HCAPLUS

CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis(4-benzoylphenyl)-2,5-dihydro- (9CI) (CA INDEX NAME)



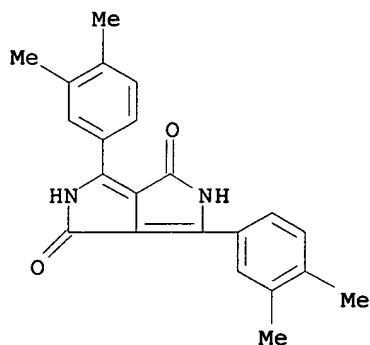
RN 84632-59-7 HCAPLUS

CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis[4-(1,1-dimethylethyl)phenyl]-2,5-dihydro- (9CI) (CA INDEX NAME)



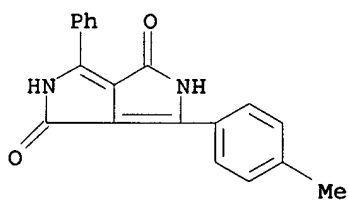
RN 84632-60-0 HCAPLUS

CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis(3,4-dimethylphenyl)-2,5-dihydro- (9CI) (CA INDEX NAME)



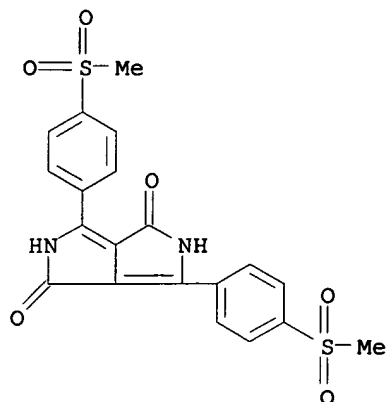
RN 84632-61-1 HCAPLUS

CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-3-(4-methylphenyl)-6-phenyl- (9CI) (CA INDEX NAME)



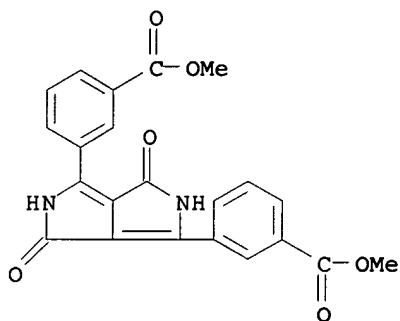
RN 84632-62-2 HCAPLUS

CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-3,6-bis[4-(methylsulfonyl)phenyl]- (9CI) (CA INDEX NAME)



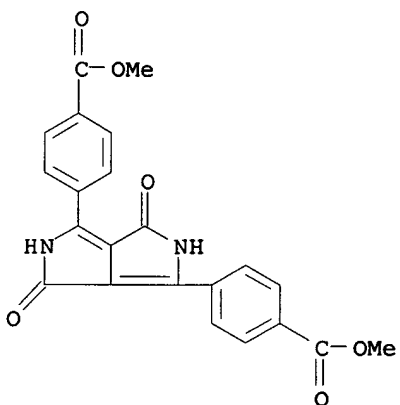
RN 84632-63-3 HCAPLUS

CN Benzoic acid, 3,3'-(2,3,5,6-tetrahydro-3,6-dioxopyrrolo[3,4-c]pyrrole-1,4-diyl)bis-, dimethyl ester (9CI) (CA INDEX NAME)



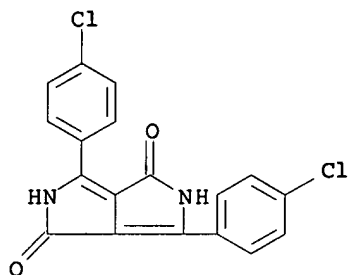
RN 84632-64-4 HCAPLUS

CN Benzoic acid, 4,4'-(2,3,5,6-tetrahydro-3,6-dioxopyrrolo[3,4-c]pyrrole-1,4-diyl)bis-, dimethyl ester (9CI) (CA INDEX NAME)



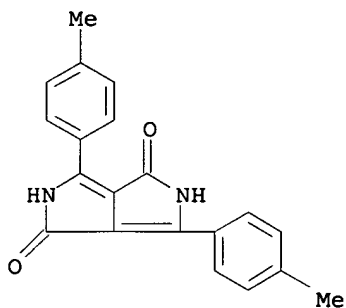
RN 84632-65-5 HCAPLUS

CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis(4-chlorophenyl)-2,5-dihydro-(9CI) (CA INDEX NAME)



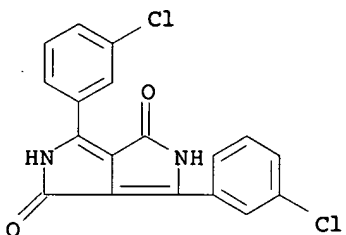
RN 84632-66-6 HCAPLUS

CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-3,6-bis(4-methylphenyl)-(9CI) (CA INDEX NAME)



RN 84632-67-7 HCAPLUS

CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 3,6-bis(3-chlorophenyl)-2,5-dihydro-(9CI) (CA INDEX NAME)

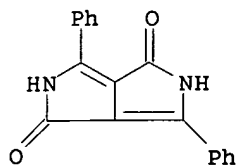


IT 54660-00-3P

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(manuf. of, as pigment for polymeric materials)

RN 54660-00-3 HCAPLUS

CN Pyrrolo[3,4-c]pyrrole-1,4-dione, 2,5-dihydro-3,6-diphenyl- (9CI)  
(CA INDEX NAME)



IC C07D207-26; C08K005-34; C09B057-00; D06P001-642  
 CC 41-5 (Dyes, Organic Pigments, Fluorescent Brighteners, and  
 Photographic Sensitizers)  
 Section cross-reference(s): 37, 40, 42  
 IT 84632-45-1P 84632-46-2P 84632-47-3P  
 84632-48-4P 84632-49-5P 84632-50-8P  
 84632-51-9P 84632-52-0P 84632-53-1P  
 84632-54-2P 84632-55-3P 84632-56-4P  
 84632-57-5P 84632-58-6P 84632-59-7P  
 84632-60-0P 84632-61-1P 84632-62-2P  
 84632-63-3P 84632-64-4P 84632-65-5P  
 84632-66-6P 84632-67-7P  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered  
 material use); PREP (Preparation); USES (Uses)  
 (manuf. of as pigment for polymeric materials)  
 IT 54660-00-3P  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered  
 material use); PREP (Preparation); USES (Uses)  
 (manuf. of, as pigment for polymeric materials)

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